ICONES FILICUM:

AD EAS POTISSIMUM SPECIES ILLUSTRANDAS DESTINATÆ,

QUÆ HACTENUS,

VEL IN HERBARIIS DELITUERUNT

PRORSUS INCOGNITÆ,

VEL SALTEM

NONDUM PER ICONES BOTANICIS

INNOTUERUNT.

FIGURES AND DESCRIPTIONS OF FERNS,

PRINCIPALLY OF SUCH

AS HAVE BEEN ALTOGETHER UNNOTICED BY BOTANISTS,

OR

AS HAVE NOT YET BEEN CORRECTLY FIGURED.

BY

WILLIAM JACKSON HOOKER, LL.D.

REGIUS PROFESSOR OF BOTANY IN THE UNIVERSITY OF GLASGOW, AND FELLOW OF THE ROYAL, ANTIQUARIAN, AND LINNEAN SOCIETIES OF LONDON;

AND

ROBERT KAYE GREVILLE, LL.D.

FELLOW OF THE ROYAL AND ANTIQUARIAN SOCIETIES OF EDINBURGH, AND OF THE LINNEAN SOCIETY OF LONDON.

IN TWO VOLUMES.

VOLUME I.

CONTAINING PLATES I.—CXX.

LONDINI:

PROSTANT VENALES APUD TREUTTEL ET WÜRTZ, TREUTTEL FIL. ET RICHTER, 30, SOHO-SQUARE:
PARISIIS; APUD TREUTTEL ET WÜRTZ, VIA DICTA DE BOURBON, No. 17.
ARGENTORATI; APUD EOSDEM, VIA DICTA GRANDE RUE, No. 3.

1831.

Mo. Bot. Garden,
1894

B. 57 00

LONDON:

PRINTED BY RICHARD TAYLOR,

PRINTER TO THE UNIVERSITY OF LONDON,

RED LION COURT, FLEET STREET.

Dates of Publication
Hooker & Greville, Icones Filicum

plates 1-60: 1827
" 61-120: 1828
" 121-140: 1829
" 141-180: 1830
" 181-200: 1830-31
" 201-250: 1831

Data from Boivin in Canadian Field Naturalist 64: 212-214. 1950.

NATHANIELI WALLICH, M.D.

SOCIETATIS REGIÆ LONDINENSIS ET INSTITUTI REGII GALLICI SOCIO,

HORTI BOTANICI CALCUTTENSIS DIRECTORI,

QUO SCRUTANTE, FLORÆ INDICÆ THESAURI LATISSIME SUNT PATEFACTI,

QUO DONANTE, COPIOSISSIME PER TOTAM EUROPAM DIFFUNDUNTUR,

VIRO, SI QUIS ALIUS,

LYNCEO, SAGACI, PERITO, BENEVOLO, MENTE PARITER AC MANU LIBERALI,

HOC QUALECUNQUE OPUS

D. D. D.

GUL. J. HOOKER.

ROB. K. GREVILLE.

THE present Work on FERNS having been brought to a close, it only remains for the Authors to return their grateful acknowledgements to those Botanists who have, in the most liberal manner, assisted them with specimens and observations. The names of these are, indeed, invariably given under the respective species which they have had the kindness to furnish; but it behoves the Authors, in an especial manner, to express their thanks to Dr. Wallich, of the Calcutta Botanic Garden; to the Rev. Lansdowne Guilding, of St. Vincent; to Dr. Bancroft, Mr. Wiles, and Mr. Lunan, of Jamaica; to Professor William Jameson, of Quito; to Charles Telfair, Esq. and Professor Bojer, of the Mauritius; and to Mr. Charles Fraser, of New Holland. To the first of these Gentlemen, in particular, they have been indebted for continued supplies of the Ferns of the vast continent of India; and these have now arrived to so great an extent,—and not from Dr. Wallich alone, but also from Dr. Wight, of Madras,—that it is in contemplation with the Authors, under the sanction and patronage of the Honourable the Board of Directors of the East India Company, to form from them a new and separate publication, under the title of "FILICES ASIATICÆ RARIORES," to appear on the same size and plan as the "PLANTÆ ASIATICÆ RARIORES" of Dr. Wallich.

Glasgow.
Edinburgh. } *November* 1, 1831.

Acrostichum crinitum.

Dr Greville del.

Swan Sc. Glasgow.

TAB. I.

ACROSTICHUM CRINITUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ACROSTICHUM*, Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Indusium* nullum (nisi squamulæ, v. setæ in quibusdam capsulis interstinctæ). *Br.*

Acrostichum *crinitum;* paleaceo-villosum, frondibus ellipticis obtusis ciliatis, fertilibus minoribus, stipitibus villosissimis.

Acrostichum crinitum. *Linn. Sp. Pl. p.* 1523. *Swartz. Syn. Fil. p.* 11. *Willd. Sp. Pl. v.* 5. *p.* 108.

Lingua cervina villosa amplis foliis subrotundis. *Plum. Fil. p.* 109. *t.* 125.

Hab. In Martinicæ arborum truncis. *Plumier.* Insula Sancti Vincentii. *Rev. L. Guilding.*

Radix e fibris ramosis, pubescentibus.

Caudex nullus, nisi reliquiæ stipitum vetustorum.

Stipes 6—8-pollicaris, crassitie pennæ anserinæ, semiteres, densissime villosus, villis longis, purpureo-nigris, basi dilatatis, horizontalibus.

Frondes steriles non raro pedales, ellipticæ seu ovales, basi apiceque obtusissimæ, paululum undulatæ, crassiusculæ, luteo-virides, costa prominente percursæ, utrinque villis nigris margineque ciliatæ. Hi villi insigniter fragiles sunt et sub lente basi dilatatæ, reticulatæ, marginibus involutis. *Frondes fertiles* plerumque duplo minores, supra margine villosæ, subtus fructiferæ.

Capsulæ totam inferiorem partem, costa excepta, tegentes, intense fuscæ, annulo vix completo cinctæ, pedicellatæ, pedicello capsula subæque longo.

Semina sphærica, subreticulata.

Fig. 1. Capsula clausa. f. 2. Eadem dehiscens. f. 3. Pedicellus. f. 4. Semina:—*magn. auct.*

Acrostichum crinitum seems to be a plant of very rare occurrence; the only station, hitherto given, being the Island of Martinique, where indeed the fructification does not appear to have been discovered. Our friend Mr. Guilding has sent us truly magnificent specimens from the Island of St. Vincent, in various states; and from these our figures have been made.

Acrostichum succisaefolium.

Dr Greville del.

Swan Sc Glasgow.

TAB. II.

ACROSTICHUM SUCCISÆFOLIUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ACROSTICHUM,* Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Indusium* nullum (nisi squamulæ, v. setæ in quibusdam capsulis interstinctæ). *Br.*

Acrostichum *succisæfolium;* fronde simplici oblonga coriacea obtusissima stipiteque ferrugineo-squamosis, squamis lanceolatis spinuloso-serratis.

Acrostichum succisæfolium. *Pet. Th. Esq. de la Flore de Trist. d'Ac. p.* 31. *Carm. Descr. of the Isl. of Trist. d'Ac. in Linn. Trans. v.* 12. *p.* 510. *Kaulf. Enum. Fil. p.* 60. *Poir. in Encycl. Meth. Suppl. v.* 1. *p.* 120.

Hab. In sylva insulæ Tristan d'Acunha. *Aubert du Petit Thouars. Carmichael.* Insulæ Mauritii. *Aubert du Petit Thouars.*

Caudex repens, hic illic fibrosus, paleis squamosis, subulatis, intense fuscis ubique obsitus.

Stipes 6-pollicaris et ultra, erectus, crassiusculus, undique ferrugineo-paleaceus.

Frons digitalis, coriacea, oblonga, costa medio instructa, basi apiceque valde obtusa, utrinque paleaceo-squamosa, squamis lanceolatis, acuminatis, spinuloso-ciliatis, membranaceis, reticulatis, non raro subpeltatis:—*fertilis* magis angusta basi apiceque obtusissima.

Capsulæ numerosissimæ, totam inferiorem partem frondis tegentes, costa excepta, intense fuscæ, pedicellatæ; *annulo* fere completo.

Semina subsphærica, reticulata, marginata.

Fig. 1. Squamæ. f. 2. 2. 2. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

This very distinct species of *Acrostichum* seems to have been found by M. du Petit Thouars in the Isle of France, as well as in Tristan d'Acunha. Our specimens are from the latter island, where they were gathered by Captain Carmichael.

Poiret has given this plant upon the authority of Jussieu's Herbarium as the *A. succisæfolium* of that author; but he probably only adopted the name of Du Petit Thouars.

Acrostichum glandulosum.

D.C. Greville del.

Swan Sc. Glasgow.

TAB. III.

ACROSTICHUM GLANDULOSUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ACROSTICHUM,* Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Indusium* nullum (nisi squamulæ v. setæ in quibusdam capsulis interstinctæ). *Br.*

Acrostichum *glandulosum;* fronde simplici oblonga coriacea basi apiceque acutiuscula subnervosa nudiuscula glabra glanduloso-punctata, stipite subsquamoso, caudice dense paleaceo.

Acrostichum glandulosum. *Carmichael MSS.*

Acrostichum oblongum? *Desv. Journ. de Bot.* 1813. *p.* 271.

Hab. In promontorio Bonæ Spei. *Carmichael.*

Caudex repens, crassus, lignosus, squamis ferrugineis, membranaceis, ciliato-dentatis, densissime obsitus.

Stipes 2—5 uncias longus, hinc sulcatus, basi præcipue subsquamosus.

Frondes 3—5-pollicares, oblongæ, coriaceæ, margine parum revolutæ, medio costatæ, nervis obscuris parallelis, punctis glandulosis pellucidis adspersæ, cætero glabræ, nitidæ, costa subtus paululum paleacea, basi apiceque acutiusculæ:—*fertiles* fronde minore angustiore, sed stipite longiore.

Capsulæ totam frondem tegentes, fuscæ, numerosissimæ; longe pedicellatæ, annulo magno.

Semina sphærica, marginata, margine tuberculato.

Fig. 1. Capsulæ. f. 2. Capsula magis aucta. f. 3. Semina:—*magn. auct.*

This is very nearly allied to *A. conforme* of Swartz: but our specimens of that plant are perfectly destitute of glandular dots. Still more closely does it approach the *A. oblongum* of Desvaux, which Kaulfuss unites with the *A. conforme.*

Acrostichum Raddianum.

TAB. IV.

ACROSTICHUM RADDIANUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ACROSTICHUM,* Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Indusium* nullum (nisi squamulæ v. setæ in quibusdam capsulis interstinctæ). *Br.*

Acrostichum *Raddianum;* frondibus stipiteque villosissimis, sterilibus lineari-lanceolatis, fertilibus ellipticis integris.

Acrostichum spathulinum. *Raddi, Fil. Brasil. p.* 3. *t.* 15. *f.* 2.

Hab. In udis rupibus torrentium super Montes Estrellenses, Brasiliæ. *Raddi.*

Radix dense cæspitosa, fibris valde ramosis subpinnatis.

Stipites plurimi ex eadem radice, 2—3 uncias longi, erecti, densissime pilosi, pilis patentibus rufescentibus.

Frondes steriles 3—4 uncias longæ, lineari-lanceolatæ, obtusæ, basi sensim in petiolum attenuatæ, utrinque margineque ferrugineo-pilosæ. Hi pili sub lente serrulati sunt, basi dilatati, concavi, reticulati, membranacei:—*fertiles* sterilibus multo breviores, ellipticæ, acutiusculæ, dorso margineque solummodo pilosæ.

Capsulæ totam frondem dorso tegentes, longe pedicellatæ, sphæricæ, late annulatæ, annulo incompleto.

Semina parva, sphærica.

Fig. 1. Pilus vel squama. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

We have changed the name which Professor Raddi applied to this Fern, because of its similarity with that of *spathulatum,* given by Bory de St. Vincent to a species of the Isle of France, and which, as far as we can judge from the figure in the Voyage aux Quatres Isles des Mers d'Afrique, we agree with Raddi in considering very nearly indeed allied to the present; differing almost solely in the very obtuse and emarginate extremity of the fertile fronds.

1

1

2

Ceterach peduncularia.

Dr Greville del.

Swan Sc. Glasgow.

TAB. V.

CETERACH PEDUNCULATA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *CETERACH.* *Sori* lineares transversales. *Indusia* nulla. *Willd.*

Ceterach *pedunculata;* fronde simplici lato-lanceolata sinuato-crenata reticulata basi attenuata, fertili longe stipitata, soris e costa ad marginem frondis attingentibus.

Hab. Sylhet Ind. Orientalis, ubi legit *D. Smith.* Misit clariss. *Wallich.*

Caudex repens, lignosus, tortuosus, pennæ passerinæ crassitie, subtus radiculosa, radiculis e fibris ramosis descendentibus, quorum majoribus hirsutis.

Frondes steriles et fertiles ex eadem caudice, utraque stipitata.

Sterilis: Stipes erectus, glaber, gracilis, nitidus, pallide fuscus hinc sulcatus, 3—4-pollicaris. *Frons* 4—6-pollicaris, lato-lanceolata, membranacea, fusco-viridis, apice acuminata, basi attenuata, decurrente, margine sinuato-crenata, costa instructa venisque horizontali-patentibus, venulis anastomosantibus.

Fertilis: Stipes ut in sterili, sed triplo longior. *Frons* ut in sterili, sed magis angusta, crenata, substantiaque firmiore. *Indusium* nullum. *Sori* lineares, intense fusci, in venis parallelis et cum iis alternantibus et totam latitudinem e costa ad marginem occupantes. *Capsulæ* sphæricæ, sublonge pedicellatæ, reticulatæ, annulo fere completo. *Semina* minuta, oblonga, vix angulata, fusca.

Fig. 1. Capsulæ. f. 2. Semina:—*magn. auct.*

How far the genus *Ceterach* merits to be distinguished from *Grammitis* must be left to be determined by future observation. Kaulfuss makes one of the characters to depend on the chaffy scales with which the fructification is covered, as in *Ceterach Officinarum.* These scales are totally wanting in our plant; but the *sori* are *transverse,* upon which appears to rest the main character of the genus as distinguishable from *Grammitis.*

Grammitis again, according to Mr. Brown, has the *sori* "venulâ unicâ insidentes." In *Ceterach pedunculata* they occupy each a number of veinlets or reticulations exactly intermediate between the straight lateral veins.

Grammitis decurrens

J. Greville del.

Swan Sc. Glasgow.

TAB. VI.

GRAMMITIS DECURRENS.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *GRAMMITIS.* *Sori* oblongi, lineares, recti, sparsi. *Indusia* nulla. *Willd.*

Grammitis *decurrens;* fronde pinnatifida, segmentis remotis lanceolatis acuminatis integerrimis, stipite rachique glabris.

Grammitis decurrens. *Wall. MSS.*

Hab. In India Orientali (Nepal?). *Wallich.*

Caudex repens, crassus, valde fibrosus, fibris ramosis non raro hirsutis.

Stipes pedalis et ultra, pennæ corvinæ crassitie, erectus, glaber, nitidus, fuscus, teres, hinc sulcatus.

Frons, circumscriptione late ovata, profunde pinnatifida, segmentis 6—8-pollicaribus, patentibus, lanceolatis, acuminatis, coriaceo-membranaceis, apice acuminatis, marginibus integerrimis; rachi lævi superne late, inferne anguste alata.

Sori in medio frondis ut et in segmentis, lineares, obliqui, venulis suppositi, prope costam, sed non ad marginem attingentes.

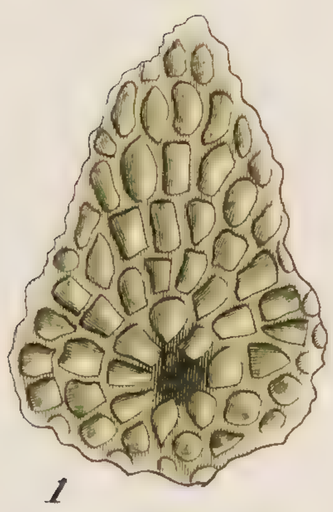
Capsulæ sphæricæ, longe pedicellatæ, reticulatæ, annulo incompleto.

Semina parva, oblongo-subreniformia.

Fig. 1. 1. Capsulæ. f. 2. Semina:—*magn. auct.*

In the *Grammitis decurrens* of Dr. Wallich we have a species quite unlike any other described plant of the genus, and very similar in habit to many species of *Polypodium.*

We have received specimens from Dr. Wallich in 1820, and again in 1826 from the Honourable the East India Company; but the exact place where the plants were gathered is not mentioned.



1

3

4

2

Tænitis furcata

TÆNITIS FURCATA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *TÆNITIS.* *Sorus* linearis, continuus, quandoque interruptus, longitudinalis, inter costam et marginem exteriorem frondis situs. *Indusium* nullum. *Willd.*

Tænitis *furcata;* frondibus dichotomo-partitis pinnatifidisve, laciniis lineari-lanceolatis acutissimis, subtus squamuloso-punctatis.

Tænitis furcata. *Willd. Sp. Pl. v.* 5. *p.* 136. *Smith in Rees Cycl.*

Pteris furcata. *Linn. Sp. Pl. p.* 1531. *Swartz. Syn. Fil. p.* 95.

Lingua cervina furcata. *Plum. Fil. p.* 122 *et* 141.

Hab. In sylvis Hispaniolæ. *Plumier.* Insula Sancti Vincentii. *Rev. L. Guilding.* Insula Trinitatis. *D. Lockhart.*

Caudex repens, ramosus, densissime squamoso-tomentosus, intense fuscus.

Stipes fere nullus.

Frons spithamæa ad pedalem, erecta, inferne indivisa, linearis, basi attenuata, superne vel dichotomo-partita vel pinnatifida; laciniis ultimis et nonnunquam lateralibus furcatis; omnibus lineari-lanceolatis vel linearibus, 3—6 vel ad 8 uncias longis, 6 lineas (in specimine Plumieri unciam) latis, coriaceo-membranaceis, integerrimis, acutissimis, costatis et obscure venosis, facie superna viridibus, subnitidis fere nudis, subtus pallidioribus punctato-squamulosis, squamulis minutis, ovatis, reticulatis, peltatis.

Sori in duas lineas longitudinales prope marginem frondis, et totam fere longitudinem laciniarum plerumque occupantes. *Indusium* omnino nullum.

Capsulæ pedicellatæ, annulo completo.

Semina oblonga vel subreniformia.

Fig. 1. Squamula. f. 2. Portio frondis cum soris. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

If we are right in referring this undoubted species of *Tænitis* to the *T. furcata* of Swartz and the *Lingua cervina furcata* of Plumier, it would seem to be a species of very rare occurrence, and only hitherto known to Plumier. The figure in our plate indeed differs from that of Plumier in its much narrower fronds, and in the divisions being rather such as to give the character of pinnatifid than regularly dichotomous: but since the annexed engraving was finished, we have received specimens from His Excellency Sir Ralph Woodford of Trinidad, gathered by Mr. Lockhart, which have the fronds considerably broader, still narrower than Plumier's plant, and with some of the individuals (evidently the younger ones) simply dichotomously divided. The more perfect state of the plant is perhaps constantly pinnatifid with few segments, and the breadth of the frond is liable to much variation.

Pteris australis

Dr Greville del.

J. Swan Sculp.

TAB. VIII.

PTERIS AUSTRALIS.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *PTERIS*, Linn. *Sori* lineares, marginales, continui; capsulis sinu involucri insertis.
Involucrum marginale, continuum, scariosum, intus liberum. *Br.*

Pteris *australis*; fronde dichotome radiata, laciniis linearibus acutis subfalcato-secundis, stipite frondem subæquante.

Asplenium australe. *Swartz. Syn. Fil. p.* 74 *et* 258. *t.* 3. *f.* 1. *Willd. Sp. Pl. v.* 5. *p.* 308.
Acrostichum australe. *Linn. Suppl. p.* 444. (*non Vahl.*)

Hab. Insulis Mauritii et Borboniæ.

"*Stipites* plures e cæspite squamis lineari-subulatis, membranaceis, ferrugineis, nitentibus congesta, radiculas simplices villosiusculas fuscas inferne emittente," erecti, flexuosi, 4—5-pollicares, filiformes, hinc sulcati.

Frondes lineari-filiformes radiatim dichotomæ, laciniis 3—4-pollicaribus, acutis, subfalcato-secundis, glabris nitidis, ubique dorso sulcatis, marginibusque introflexis.

Indusia e margine introflexo frondis continua, membranacea, initio fere ad costam attingentia.

Capsulæ numerosæ, fuscæ.

Semina sphærica, minuta.

Fig. 1. Portio frondis horizontaliter secta, cum indusiis capsulisque. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

If our figure of the structure of the frond of this plant, and especially of the indusia, be correct, —and we have examined it with considerable care,—we trust we shall be considered to have done right in removing it from *Asplenium* to *Pteris*.

Our specimens were gathered by Captain Carmichael in the Mauritius.

Trichomanes flexibundum

D.r Greville. del.

Swan. S.

TRICHOMANES FLORIBUNDUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. ***TRICHOMANES,*** Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *floribundum;* frondibus pinnatis, pinnis lanceolatis spinuloso-serratis, superioribus decurrentibus.

Trichomanes floribundum. *Humb. et Bonpl. MSS. Willd. Sp. Pl. v.* 5. *p.* 505. *Humb. et Kunth Nov. Gen. Pl. Am. Æq. v.* 1. *p.* 25. *Kunth Syn. Pl. v.* 1. *p.* 89.

Trichomanes pinnatum. *Swartz. Syn. Fil. p.* 142.

Trichomanes rhizophylla. *Swartz. Syn. Fil. p.* 142. "*Cavan. Præl.* 1801. *n.* 696."

Hab. Ad ripam fluminis Rio Negro, prope San Carlos, in sylva opaca (Missiones del Orinoco). *Humb. et Bonpl.* In sylvis densis prope lacum Asphaltum, Insulæ Trinitatis. *De Schach.* Jamaica. *Masson.* Guiana. *Herb. De Lessert.*

"*Radix* fusca fibrosa, fibris crassis." *Willd.*

Stipes longitudine variat 2—3 uncias ad 6—8-pollicares, filiformis, gracilis.

Frondes, circumscriptione ovatæ, vel ovato-deltoideæ, pinnatæ, pinnis nunc 3—4-, nunc 16-jugis, cum impari, alternis, patentibus, lanceolatis, 3—6-pollicaribus, spinuloso-serratis, obtusiusculis, basi superiore truncata, inferiore subdecurrente, costatis, venis furcatis vasis transversalibus rete tenerrimum includentibus connexis (f. 2.):—summis confluentibus; terminali elongata;—in fronde sterili, loco pinnæ terminalis, *rachis* apice nuda, elongata, radicans.

Sori marginales, numerosissimi, serraturas terminantes.

Indusia cyathiformia, exserta, compressa, ore sub-bilabiato.

Receptaculum indusio duplo triplove longius.

Capsulæ ad basin receptaculi, rotundato-compressæ sessiles, annulo completo transversali cinctæ.

Semina minuta subsphærica.

Fig. 1. Apex pinnæ fertilis. f. 2. Portio pinnæ. f. 3. Indusium, cum ejus receptaculo. f. 4. Receptaculi basis, cum capsulis tribus. f. 5. Capsula. f. 6. Semina:—*magn. auct.*

A beautiful and we believe very rare species of *Trichomanes,* remarkable for its numerous marginal fructifications, and, as Kaulfuss well observes, for the nature of its *venation.* The lateral parallel veins resemble those of many monocotyledonous plants; and from the extreme delicacy of the parenchyme between these veins, the pinnæ are frequently torn in the direction of them, as we see to be the case in the different species of *Musa.*

The late Baron de Schach favoured us with the specimens here figured, from the shores of the Asphaltum lake in Trinidad.

Trichomanes lucens.

Dr Greville del.

Swan Sc. Glasgow.

TRICHOMANES LUCENS.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *TRICHOMANES,* Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *lucens;* subhirsutum, frondibus sub-bipinnatifidis pinnis horizontalibus lanceolatis acutis, laciniis brevibus sub-bidentatis, stipite rachique alatis.

Trichomanes lucens. *Swartz. Fl. Ind. Occ. v.* 3. *p.* 1734. *Syn. Fil. p.* 143. *Willd. Sp. Pl. v.* 5. *p.* 506.

Hab. Ad latera umbrosa cavernarum montium Jamaicæ. *Sw.* In monte Sancti Andreæ, Insulæ Sancti Vincentii. *Rev. L. Guilding.* In Demerara, Americæ Meridionalis. *C. S. Parker.*

Caudex repens, fibrosus, primum paleaceus, demum nudus.

Stipes 3—4-uncialis, basi teres, pilosus, senectute nudus, superne præcipue alatus.

Frons palmaris ad pedalem vel sesquipedalem, anguste oblongo-lanceolata, pellucida apice attenuata, sub-bipinnatifida. *Pinnæ* horizontales, approximatæ, oblongo-lanceolatæ, magis minusve acutæ, venosæ, reticulatæ, venis nunc, et margine, hirsutis, laciniis rotundatis, brevibus, obtusis, bi-tridentatis.

Sori in partem superiorem frondis, et ad apicem pinnarum, in singula lacinia.

Indusium urceolato-cylindraceum, immersum, ore subcompresso truncato.

Receptaculum indusio triplo longius, filiforme.

Capsulæ ut in *Tr. alato.*

Semina sphærica.

Fig. 1. Pinnæ portio cum soro. f. 2. Pars receptaculi, cum capsulis duabus. f. 3. Capsula. f. 4. Semina:—*magn. auct.*

Trichomanes lucens varies much in size. Our specimens from St. Vincent are generally from six to ten inches in height, while those brought to us from Demerara on the continent of South America, by our valued friend C. S. Parker, Esq., are nearly two feet in length.

Trichomanes alatum

D.C. Sowerby del.

TAB. XI.

TRICHOMANES ALATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *TRICHOMANES,* Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *alatum;* pilosiusculum, frondibus bipinnatifidis, pinnis lanceolatis acuminatis, laciniis lanceolatis inciso-serratis, stipite (superne) rachique alatis.

Trichomanes alatum. *Swartz. Fl. Ind. Occ. v.* 3. *p.* 1732. *Syn. Fil. p.* 143. *Willd. Sp. Pl. v.* 5. *p.* 506. (*non Hook. in Fl. Lond.*)

Filicula tota translucens. *Plum. Fil. t.* 50. *f.* D. (vix bona.)

Hab. In montibus excelsis Jamaicæ australis, alibique in India Occidentali. *Swartz.* Hispaniola, et in Antillis minoribus. *Willd.* Insula Sanctæ Vincentii. *Rev. L. Guilding.*

Caudex repens.

Radix e fibris plurimis longis nigricantibus vix tomentosis.

Stipes 3—4-pollicaris, gracilis superne, e fronde utrinque decurrente, alatus, primum hirsutus, demum glaber.

Frondes translucentes ovato-lanceolatæ, apice attenuatæ, bipinnatifidæ; pinnis vel segmentis primariis lanceolatis attenuatis, laciniis lanceolatis, acutis, inciso-serratis, omnibus nervosis, sub lente pulcherrime reticulatis, nervis margine pilosis, pilis raris nunc furcatis. *Rachis* alatus, plerumque pilosus.

Indusia urceolata, dentibus laciniarum immersa, ore aperto truncato.

Receptaculum indusio triplo quadruplo longius, ad basin capsulis tectum.

Semina globosa.

Fig. 1. Frondis laciniæ duæ. f. 2. Indusium verticaliter sectum. f. 3. Portio receptaculi cum capsulis duabus. f. 4. Capsula. f. 5. Semina:—*magn. auct.*

Excellent, in almost every respect, as is the description that Dr. Swartz has given us of this plant, yet, probably in consequence of the indifferent figure referred to in Plumier, it has had the misfortune of being little understood; the *Trichomanes lucens* having generally been sent to us by the name of *alatum,*—a larger and much finer plant, as will be seen by our figure.

This must not be confounded with the *Trichomanes alatum* * of *Hook. in Fl. Lond.* (the *Hymenophyllum alatum* of *Engl. Bot.*) On referring that species to its proper genus, the old specific name was retained, without recollecting that it was preoccupied. It should now be called, after Smith in Rees's Cyclopædia, *T. europæum.*

Our finest specimens of the true *T. alatum* are from the Rev. Lansdown Guilding.

* The two species are nevertheless very nearly allied. The European plant is much more divided, so as to be 3—4 pinnatifid, the ultimate segments never serrated.

Trichomanes crispum

Dr Greville del.

Swan Sculpsit.

TAB. XII.

TRICHOMANES CRISPUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *TRICHOMANES,* Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *crispum;* subhirsutum, frondibus pinnatifidis inferne pinnatis, pinnis horizontalibus oblongis obtusis obscure denticulatis, soris ad apicem pinnarum.

Trichomanes crispum. *Linn. Sp. Pl. p.* 1560. *Swartz. Fl. Ind. Occ. v.* 3. *p.* 1731. *Syn. Fil. p.* 142. *Willd. Sp. Pl. v.* 5. *p.* 504. "*Hedw. Fil. t.* 4. *f.* 2." *Smith in Rees Cycl.*

Polypodium crispum calyciferum. *Plum. Fil. p.* 67. *t.* 86.

Hab. In Jamaica, Martinica, Demerara, et in Insula Guadeloupe. *C. S. Parker.* Insula Sancti Vincentii. *Rev. L. Guilding.*

Caudex longe repens, squamosus.

Radix fibrosa, nigra.

Stipes 3—6 uncias longus, erectus, hirsutus, hinc subcanaliculatus.

Frons 6-uncialis usque ad sesquipedalem, oblongo-lanceolata, acutiuscula, pinnatifida, inferne pinnata. *Pinnæ* sesquipollicares, horizontales, parallelæ, approximatæ, pellucidæ, crispatulæ, oblongæ, obtusæ, nervis dichotomis margineque subhirsutæ, brevissime et obscure denticulatæ, reticulatæ, areolis minutis.

Sori ad apicem, solummodo, pinnarum, venas terminantes.

Indusia fere omnino immersa, cylindracea, ore aperto, subdilatato undulato.

Receptaculum indusio triplo quadruplo longius.

Capsulæ ut in reliquis hujus familiæ.

Semina parva, subsphærica.

Fig. 1. Apex pinnæ, cum soris. f. 2. Ejusdem portio magis aucta. f. 3. Indusium verticaliter sectum. f. 4. Capsulæ. f. 5. Semina:—*magn. auct.*

This, like the *Trichomanes lucens,* is liable to vary much in size. Our largest specimens are from Guadeloupe, gathered by Mr. Parker. Those here figured are from St. Vincent, and are intermediate between the largest and the smallest size. We possess some small and apparently young specimens which are thickly clothed with ferruginous hair, but do not seem otherwise to differ from the more common state of the plant.

Trichomanes sinuosum

D.C. Greville del.

Swan Sc Glasgow.

TRICHOMANES SINUOSUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. ***TRICHOMANES,*** Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *sinuosum;* pilosiusculum, frondibus lanceolatis sinuato-pinnatifidis in stipitem decurrentibus, laciniis ovato-lanceolatis obtuse sinuato-dentatis, soris ad apicem pinnarum.

Trichomanes sinuosum. *"Richard in litt." Willd. Sp. Pl. v.* 5. *p.* 502. *Lam. Illustr. t.* 871. *f.* 1.

Trichomanes quercifolium. *Desv. in Berl. Mag. v.* 5. *p.* 328.

Hab. In Guadeloupe. *Willd.* Insula Sancti Vincentii. *Rev. L. Guilding.*

Caudex repens, filiformis, gracilis.

Stipes 2—4-pollicaris, filiformis, compressa, superne e basi decurrente frondis, alata.

Frondes 6—10-pollicares, lanceolatæ, sinuato-pinnatifidæ, tenerrimæ, pellucidæ, reticulatæ, laciniis ovato-lanceolatis, obtusis, brevissime sinuato-dentatis, simpliciter venosis, venis marginibusque pilosiusculis, pilis prope basin articulatis, simplicibus vel bi-trifurcatis.

Sori ad apicem pinnarum, pauci.

Indusium cyathiforme, immersum, ore aperto.

Receptaculum filiforme, indusio triplo longius.

Semina sphærica.

Fig. 1. Portio pinnæ, cum soris duobus. f. 2. Indusium verticaliter sectum. f. 3. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

A very delicate species, but, except in this greater degree of delicacy, smaller size and more obtuse segments, very nearly allied to *T. lucens.* Smaller specimens than those here figured are scarcely more than sinuated at the margin, and bear a single indusium upon each lobe; whilst larger specimens seem almost to have the character of the younger plants of *T. lucens.*

1

2

3 3 3

4

Gleichenia Hermanni

Dr Greville del.

Swan Sc. Glasgow.

GLEICHENIA HERMANNI.

FILICES.—Gleicheneæ. *Br.*, *Kaulf.* Schismatopterides. *Willd.*

Gen. Char. *GLEICHENIA.* *Capsulæ* annulo completo striato subsessiles, in soris rotundis dorsalibus, sæpius definitæ. *Indusium* nullum.—Frondes *dichotomæ vel furcatæ.*

Gleichenia *Hermanni*; stipitibus dichotomis proliferis, ramis ultimis tantum frondosis, frondibus lanceolatis pinnatifidis glabris subtus glaucis, pinnis linearibus integerrimis obtusis, capsulis numerosis pyriformibus subpedicellatis. *Br.*

Gleichenia Hermanni. *Br. Prodr. Fl. Nov. Holl. p.* 161.

Mertensia dichotoma. *Willd. in Act. Holm.* 1804. *p.* 167. *Swartz. Syn. Fil. p.* 163. *Willd. Sp. Pl. v.* 5. *p.* 71.

Polypodium dichotomum. *Thunb. Jap. p.* 338. *t.* 37 ?

Dicranopteris. *Bernh. in Schrad. neu Jour.* 1806. *p.* 38. (*fide Br.*)

Filix Calmaria. *Rumph. Amb. v.* 6. *p.* 85. *t.* 38.

Hab. In India Orientali, Japonia, Zeylona, Amboina, Java, Mauritio, Nepalia. *Wallich.* In Nova Hollandia. *Br.* Insulis Societatis et Sandvicentibus. In India Occidentali, Dominica, insula Sancti Vincentii. *Rev. L. Guilding.*

Caudex repens, tomentosus, fibrosus.

Stipes 3-pedalis, lævis, fuscus, nitidus, teres, repetitim dichotomus, ex axillis proliferus, foliaceo-bracteatus, ramis ultimis frondosis.

Frondes geminato-furcatæ; *singula* lanceolata apice attenuata, infra medium latiore, basi subangustiore, paululum falcata profunde pinnatifida, segmentis horizontalibus, linearibus, subattenuatis, apice obtusis, emarginatis, margine integro (nisi in speciminibus nostris e Nova Hollandia et Insula Mauritii, ubi segmentis inferioribus iterum pinnatifidis). *Color* partis superioris frondium viridis, subtus glaucus. *Rachis* costaque glabræ, statu juniore non raro pubescentes. *Nervi* obliqui, obscuri, dichotomi.

Sori e capsulis 5—10, nervis, intra costam et marginem insertis, rotundato-pyriformibus, pallide flavo-fuscis, indusio destitutis, reticulatis, annulo lato distincto articulato integro cinctis, brevissime pedicellatis, superne hiantibus.

Semina minuta, oblonga, subreniformia.

Fig. 1. Portio frondis a parte inferiore visa. f. 2. Ejusdem portio cum soris. f. 3. 3. 3. Capsulæ. f. 4. Semina: —*magn. auct.*

This is perhaps the species of this curious genus which is the most generally dispersed, being found in the West as well as the East Indies, in Japan, in the Society and Sandwich Isles, and in New Holland. All these countries, however, are intratropical, except Japan and Nepal. The plant is liable to considerable variation. The specimen figured in the *Flora Japonica,* and those which we have received from M. Bojer at the Mauritius, as well as our New Holland individuals, have the lowermost segments of the fronds pinnatifid, so as to appear like those of the original *Gleicheniæ,* with which we think Mr. Brown has justly united the *Mertensiæ.*

From the Prince of Wales Island we have a species which scarcely differs from this but in having the segments of the frond much longer and equally linear, so that each frond has almost exactly the appearance of that of *Polypodium pectinatum.* Probably the *Mertensia emarginata* of Raddi, from Brazil, is not really distinct from our plant. It has the lower segments of the frond shorter, the whole frond somewhat narrower: the emarginate apices are common to both. To this Raddi refers the *M. glaucescens* of Humboldt and Willdenow.

1

2

3

4

5

Gleichenia immersa.

Dr. Greville del.

Swan Sc. Glasgow.

GLEICHENIA IMMERSA.

FILICES.—Gleicheneæ. *Br., Kaulf.* Schismatopterides. *Willd.*

Gen. Char. *GLEICHENIA. Capsulæ* annulo completo striato subsessiles in soris rotundatis dorsalibus sæpius definitæ. *Indusium* nullum. *Frondes* dichotomæ vel furcatæ.

Gleichenia *immersa;* fronde dichotoma ramosa, gemma primaria prolifera, pinnis geminatis profunde pinnatifidis, laciniis linearibus subtus costa utrinque ferrugineo-tomentosis, ramis semipinnatifidis, soris minutis tomento immersis. *Kaulf.*

Mertensia immersa. *Kaulf. Enum. Fil. p.* 38.

Hab. In Brasiliæ Insula St. Catharinæ. *Chamisso.* Insula Sancti Vincentii. *Rev. L. Guilding.* Ex insula Guadeloupe communicavit *Cl. Torrey.*

Stipes repetitim dichotomus, primum pubescens, demum glaber, nitidus, fuscus, ex axillis proliferus, ramis ultimis (et antepenultimis, hinc) frondosis.

Frondes geminato-furcatæ, lanceolatæ, basi apiceque subattenuatæ, 6-unciales ad sesquipedalem longæ, supra glabræ, subtus ferrugineo-tomentosæ, profunde fere ad basin pinnatifidæ, segmentis linearibus horizontali-subfalcatis, marginibus omnino integerrimis. *Rachis* demum glabriuscula. *Costa* pubescens.

Sori tomento ferrugineo immersi, e capsulis quatuor radiatim dispositis, sphæricis, fere omnino sessilibus, oblique subverticaliter lato annulatis demum e vertice dehiscentibus.

Semina oblongo-reniformia, parva.

Fig. 1. Portio frondis ab inferiore parte visa. f. 2. Ejusdem portio, cum soris. f. 3. Portio segmenti, tomento abraso, cum soro capsulis duabus. f. 4. Capsulæ. f. 5. Semina:—*magn. auct.*

This seems to agree so well with the *Mertensia immersa* of Kaulfuss, that we can have little doubt of the two plants being the same. It is possible that it may be the *M. pubescens* of Humboldt and Willdenow; though that is said to be clothed beneath with white down. Again, the *M. bifida* of the same author has many points in common with this; but according to the figure in *Act. Holm.* the branch immediately below the ultimate one is pinnatifid on each side. May not this be the *M. decurrens* of Raddi?

Dr Greville del

Anemia adiantifolia var. B.

Swan Sc. Glasgow.

TAB. XVI.

ANEMIA ADIANTIFOLIA β ASPLENIFOLIA.

FILICES.—OSMUNDACEÆ. *Br., Kaulf.* SCHISMATOPTERIDES. *Willd.*

GEN. CHAR. *ANEMIA*, Sw. *Capsulæ* ovatæ, vertice radiatim striatæ, in spicis compositis unilateralibus dispositæ, basi adfixæ, longitudinaliter dehiscentes. *Indusium* nullum. *Kaulf.*

DIV. *Spicæ pedunculatæ geminatæ ad basin frondis.*

ANEMIA *adiantifolia;* fronde bi-tripinnatifida triangulari, laciniis ovato-cuneatis apice denticulatis, subtus rachique pubescentibus, stipite glabro.

α. fronde tripinnatifida, laciniis acutis.

Anemia adiantifolia. *Swartz. Syn. Fil. p.* 157. *Willd. Sp. Pl. v.* 5. *p.* 94.

Osmunda adiantifolia. *Linn. Sp. Pl. p.* 1520.

Osmunda filiculæfolia major. *Plum. Fil. p.* 135. *t.* 158.

Lunaria elatior Adianti albi folio duplici spica. *Sloane Jam. v.* 1. *p.* 71.

β. *asplenifolia*, fronde bipinnatifida, laciniis obtusis. Tab. XVI.

Anemia asplenifolia. *Sw. Syn. Fil. p.* 157.

Osmunda asplenifolia. *Lam. Dict. v.* 5. *p.* 652.

HAB. In India Occidentali. Insulis Bahamensibus. *D. Swainson.* β. In Dominica. *Lamarck.* Jamaica.

VAR. β.

Radix cæspitosa, fibrosa, fibris ramosis.

Stipes 4—6-uncialis, erectus, glaber, hinc sulcatus, basi nigricans, superne pubescens.

Frondes 3—5 uncias longæ, ovato-triangulares, bipinnatifidæ, pinnis lanceolatis, pinnulis ovato-cuneatis, coriaceis, tenuissime venosis, nitidis, inferioribus nunc bilobis, apice obtusis denticulatis, superne glabris, subtus rachique breviter pilosis.

Spicæ compositæ, bipinnatifidæ, pedunculatæ, geminæ, ad basin frondis insertæ, laciniis angustis, pilosis, hinc capsulis tectæ. *Pedunculi* magis minusve pubescentes.

Capsulæ obliquæ, ovatæ, sessiles, hinc gibbæ, reticulatæ, pallide fuscæ, paulo infra apicem radiato-annulatæ, extus longitudinaliter dehiscentes.

Semina parva, sphærica, sub summa lente reticulata.

Fig. 1. Portio spicæ a dorso visa. f. 2. Ejusdem pars superior. f. 3. Capsula. f. 4. Eadem dehiscens. f. 5. Semina:—*magn. auct.*

We received our specimens of this plant from Jamaica. They entirely accord with the *Anemia asplenifolia* of Swartz; and we are of opinion, with Willdenow, that it can only be considered a variety of the *A. adiantifolia.*

Schizaea dichotoma

J. Greville del.

Swan Sc Glasgow.

SCHIZÆA DICHOTOMA.

FILICES.—Osmundaceæ. *Br., Kaulf.* Schismatopterides. *Willd.*

Gen. Char. *SCHIZÆA,* Sm. *Capsulæ* ovales, sessiles, apice radiatim striato, basi insertæ, in appendice divisa terminali frondis dorsales. *Indusium* e marginibus inflexis appendicis continuum, intus liberum. *Br.*

Schizæa *dichotoma;* frondibus omnibus pluries dichotomis, laciniis linearibus costatis apice attenuatis, appendicibus pinnatis adscendentibus, involucris crinitis. *Br.*

Schizæa dichotoma. *Swartz. Syn. Fil. p.* 150. "*Willd. Act. Acad. Erford.* 1802. *p.* 30. *t.* 3. *f.* 2."
Willd. Sp. Pl. v. 5. *p.* 87. *Smith in Rees Cycl. Brown Prodr. Fl. Nov. Holl. p.* 162.
" Ripidium dichotomum. *Bernhardi in Schrad. Journ.* 1800. 2. *p.* 127. *t.* 2. *f.* 3."
Acrostichum dichotomum. *Linn. Sp. Pl. p.* 1525.
" Filix cochine. *Petiv. Gazoph. t.* 70. *f.* 12."

Hab. In India Orientali, China, insula Mauritii, Madagascar, Borbonia. *Carmichael.* Nova Hollandia, intra tropicos. *Brown.*

Radix e fibris paucis, nigris, flexuosis, simplicibus, crassiusculis.

Stipites 4—6-unciales, erecti, basi teretes, apice compressi.

Frondes, circumscriptione subflabelliformes, repetitim dichotomæ laciniis linearibus, compressis, coriaceis medio costatis, glabris, plerumque lævibus, nunc, præcipue in speciminibus e Nova Hollandia, marginibus costaque dorso asperis, apicibus obtusis.

Appendices fructificantes recurvæ, profunde pinnatifidæ, a tria ad decem paria; in tribus ad quinque paribus dispositæ, oppositæ lineares semiteretes, intus costa margineque pilosæ, ultime breviores.

Capsulæ duplici serie, costa utrinque, dispositæ, sessiles, ovales, pulcherrime reticulatæ, ad verticem radiatæ, longitudinaliter, ad latus inferius (i. e. versus basin segmentorum) dehiscentes.

Semina oblonga.

Fig. 1. Appendix fructificans. f. 2. Ejus lacinia cum capsulis. f. 3. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

Mr. Brown, in his admirable *Prodromus Floræ Novæ Hollandiæ,* mentions that this plant is liable to great variation both in regard to the number of pinnæ, of which the fructifying appendage is composed, and to the roughness of the frond. Sir James Smith, too, mentions an Otaheitan variety, or, as he is inclined to think, a distinct species, which he would call *S. fastigiata,* having " the segments of its fertile fronds level-topped and exceedingly numerous, the appendages uniformly four pair, as nearly as possible, in each spike, all of them erect and parallel, not divaricated, nor are the spikes recurved." We have received what we consider to be the same plant, from the East India Company, named by Dr. Wallich *S. dichotoma:* but here the appendages are not one-fourth the size of those we have figured.

The specimens here represented were sent to us from the Mauritius by M. Bojer.

1

2

3

4

5

6

7

Danea alata

D.T. Greville del.

Swan Sc. Glasgow.

TAB. XVIII.

DANÆA ALATA.

FILICES.—Marattieæ. *Bory.* Poropterides. *Willd.*

Gen. Char. *DANÆA,* Sm. *Sori* lineares, dorsales, transversi, paralleli. *Capsulæ* in series geminatas arcte connatæ, superne poro dehiscentes. *Indusium* superficiarium soros cingens. (Asplenii Sp. *Linn.*)

Danæa *alata;* fronde pinnata, rachi subnodosa superne alata; pinnis subsessilibus, *sterilibus* elliptico-oblongis acuminatis apice serratis, *fertilibus* anguste lanceolatis integerrimis.

Danæa alata. *Sm. Tracts, p.* 261. *Sw. Syn. Fil. p.* 167. *Willd. Sp. Pl. v.* 5. *p.* 68. *Sm. in Rees Cycl.—Kaulf. Enum. Fil. t.* 1. *f.* 3. (*pinna fertilis et sorus.*)

Lingua cervina nodosa minor. *Plum. Fil. Am. p.* 91. *t.* 109.

Hab. In Martinica. *Plumier.* Jamaica. *Swartz.* Insula Sancti Vincentii, non raro. *Rev. L. Guilding.*

Caudex longus, repens, carnosus, nigro-fuscus, supra reliquiis stipitum vetustorum tectus, hic illic fibrosus.

Frondes bi-tripedales, simpliciter pinnatæ, erectæ;

Steriles, circumscriptione oblonga, basi attenuata, apice acuta. *Stipes* subpedalis, tres quatuor lineas longus, squamulis ferrugineis obsitus, basi teres, auriculatus, facie superna canaliculatus. *Rachis* compressa, ad pinnarum insertionem nodosa, superne membrana utrinque alata. *Pinnæ* subremotæ, breviter petiolatæ, oppositæ, 4—6-pollicares, *inferiores* multo minores, ovales, *reliquæ* oblongo-ellipticæ, apice attenuatæ, dentato-serratæ, basi inæquali subcordata, supra intense virides, glabriusculæ, subtus pallidiores, margine incrassato; *costa* subtus ferrugineo-squamosa, nervis numerosis parallelis distinctis fere horizontalibus, simplicibus, vel, rarissime, furcatis;

Fertiles, quoad formam, fere omnino ut in sterilibus, sed pinnæ multoties angustiores, lineari-lanceolatæ, acuminatæ, margine undulatæ potius quam serratæ. *Indusium* membranaceum, soros undique cingens.

Capsulæ 12—16, ovales, nervo, ut nobis videtur, in series geminatas et arcte connatas unitæ, massam (vel sorum) unicam linearem formantes, parallelæ, et totam fere inferiorem partem pinnarum occupantes, superne poro dehiscentes.

Semina minuta, sphærica vel subreniformia.

Fig. 1. Portio pinnæ fertilis. f. 2. Indusium a quo sorus removetur. f. 3. Sorus lateraliter visus. f. 4. Sorus a dorso visus. f. 5. Portio frondis, cum duobus soris, longitudinaliter secta. f. 6. Sorus hinc longitudinaliter sectus. f. 7. Semina:—*magn. auct.*

We are not aware that any attempt has yet been made to cultivate this handsome and curious species of Fern: but now that we have been so successful with many other individuals of this graceful tribe of plants, we do not yet despair of seeing it flourish in our stoves.

It is probably a native of several of the West India islands, having been found in Martinique by Plumier, in Jamaica by Swartz, and in the fertile island of St. Vincent by our friend the Rev. Lansdown Guilding, whose inestimable botanical communications from that country, particularly of Ferns, have been one of the principal inducements for us to undertake the present publication.

The genus *Danæa* is a very distinctly marked one, having the under side of the pinnæ almost wholly covered with closely placed, parallel, immersed sori, formed of a double row (the rows joined by the lateral nerve upon which the sorus is inserted) of closely united capsules, each opening by a pore at the extremity. Upon removing a sorus, a deep cell or cavity remains; as at fig. 2.

Ophioglossum pendulum.

D.r Greville del.

Swan Sc. Glasgow.

TAB. XIX.

OPHIOGLOSSUM PENDULUM.

FILICES.—Ophioglosseæ. *Br., Kaulf.* Stachyopterides. *Willd.*

Gen. Char. *OPHIOGLOSSUM.* Linn. *Capsulæ* nudæ, in spicam articulatam disticham connatæ, uniloculares, transverse dehiscentes, bivalves. *Willd.*

Ophioglossum *pendulum;* fronde pendula lineari dichotoma, spica pedunculata medio frondis inserta.

Ophioglossum pendulum. *Linn. Sp. Pl. p.* 1518. *Swartz. Syn. Fil. p.* 170. *Willd. Sp. Pl. v.* 5. *p.* 60. *Smith in Rees Cycl. Sieber Herb. Fil. n.* 16.

Scolopendria. *Rumph. Amb. v.* 6. *p.* 84. *t.* 37. *f.* 3.

Hab. In arboribus Amboynæ, ubi rarum. *Rumphius.* Mauritii. *Carmichael, Sieber.* Et in montibus excelsis insulæ Owhyhee. *David Nelson.*

Parasiticum. Frondes 2—3 ex eadem parva tuberculata radice, pendentes, bi-tripedales, usque ad quinque pedes longæ, basi angustæ, deinde lineares, tenues, siccitate coriaceo-membranaceæ, 6 lineas ad pollicem latæ, simpliciter vel bis dichotomæ, virides, reticulatæ, areolis elongatis; segmentis apice obtusis, margine undique integerrimo.

Spica pedunculata, nunc basin versus, prope medium, vel infra apicem, frondis sita, digitum ad pedem longa, pendula, linearis, compressa, marginibus utrinque capsulifera. Hæ *capsulæ* arcte connatæ, sphæricæ, transversim dehiscentes.

Pedunculus duas uncias longus, teres.

Semina parva sphærica fusco-lutea.

Fig. 1. Capsula dehiscens. f. 2. Semina:—*magn. auct.*

This noble species of *Ophioglossum,* only perhaps exceeded in size by the South American *Ophioglossum palmatum,* has been sent to us from the Mauritius by Captain Carmichael (from whose specimens the accompanying figure has been drawn) and by Dr. Sieber. It is probably not uncommon there. In Amboyna, Rumphius says, it is exceedingly rare. In the Banksian Herbarium, Sir James Smith tells us, very fine specimens are preserved, gathered by Mr. David Nelson upon the high mountains of Owhyhee.

Leman, in the *Dictionnaire des Sciences Naturelles,* suggests that on more minute examination of the fructification, this species will be found distinct from the genus *Ophioglossum:* but we see no reason for entertaining such an opinion.

1

Ophioglossum reticulatum.

TAB. XX.

OPHIOGLOSSUM RETICULATUM.

FILICES.—Ophioglosseæ. *Br., Kaulf.* Stachyopterides. *Willd.*

Gen. Char. *OPHIOGLOSSUM,* Linn. *Capsulæ* nudæ, in spicam articulatam disticham connatæ, uniloculares, transverse dehiscentes, bivalves. *Willd.*

Ophioglossum *reticulatum ;* spica caulina longissime pedunculata, fronde cordata apiculata reticulata "radice elongata."

Ophioglossum reticulatum. *Linn. Sp. Pl. p.* 1518. *Swartz. Syn. Fil. p.* 170. *Willd. Sp. Pl. v.* 5. *p.* 60. *Smith in Rees Cycl.—Lam. Illustr. t.* 864. *f.* 2. *Sieber Herb. Fil. n.* 19.

Ophioglossum cordifolium. *Rob. MSS. cum Ic.*

Ophioglossum cordatum et reticulatum. *Plum. Fil. p.* 141. *t.* 164.

Hab. In Insulis Mauritii et Borboniæ, Indiæ Orientalis. In Hispaniola, Jamaica, et Guiana, Indiæ Occidentalis.

Radix (fide Plumieri) descendens, elongata, carnosa, 2—3-pollicaris, fibris plurimis albidis simplicibus instructa.

Stipes 4—6-pollicaris, erectus, teres, viridis.

Frons solitaria, ad apicem stipitis, lato-cordata, vel cordato-rotundata, carnoso-membranacea, reticulata, areolis angulato-rotundatis, margine integerrimo, apice apiculata, basi profunde emarginata, marginibus in stipitem decurrentibus.

Pedunculus e sinu frondis, erectus, teres, gracilis, 6—7 uncias longus.

Spica terminalis, solitaria, biuncialis, lineari-compressa, mucrone terminata.

Capsulæ parvæ, arctissime connatæ, *seminibus* angulato-sphæricis repletæ.

Fig. 1. Semina:—*magn. auct.*

It is the case with this, as with many other tropical Ferns, that it is found equally in the New as in the Old World. Our specimens are all from the Mauritius; but judging from the figures of Plumier above quoted, and the testimony of other writers, there appears to be no difference between them and those that are natives of the West Indies.

The drawing was made from specimens gathered by Captain Carmichael in the Mauritius.

Acrostichum hybridum

TAB. XXI.

ACROSTICHUM HYBRIDUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ACROSTICHUM*, Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ, vel setæ in quibusdam capsulis interstinctæ). *Br.*

Acrostichum *hybridum*; frondibus oblongo-lanceolatis subacuminatis, margine costa stipiteque paleaceo-hirsutis, fertilibus multo minoribus glabris.

Acrostichum hybridum. *Bory de St. Vinc. Voyage, v. 3. p. 95. Swartz. Syn. Fil. p. 11. Willd. Sp. Pl. v. 5. p. 107.*

Acrostichum ciliare. *Pet. Th. Trist. d'Acugn. p. 32? Carmichael in Descr. of the Island of Tristan da Cunha, in Linn. Trans. v. 12. p. 510.* (fide specim. ejus.)

Acrostichum villosum. *Sieber, Syn. Fil. n. 27.* non Swartzii.

Hab. Insula Borbòniæ. *Bory.* Mauritio. *Sieber, Bojer.* Tristan da Cunha. *Carmichael.*

Caudex repens, brevis, squamis longis, numerosissimis, fuscis, lanceolato-subulatis dense obsitus, inferne fibris plurimis, ramosis, ferrugineo-tomentosis instructus.

Stipes 6—8-pollicaris, fusco-flavescens, squamis subulatis, fuscis, horizontalibus sparsim tectus.

Frons oblongo-lanceolata, 6—8 uncias longa, duas uncias et ultra lata, submembranacea, indistincte marginata, medio costata, nervis subhorizontalibus versus eorum basin bis terve dichotomis, costa, superficie raro, marginibusque dense squamoso-hirsutis. *Squamæ* subulatæ, purpureo-fuscæ, duas vel tres lineas longæ, sub lente minute serrulatæ atque pulcherrime reticulatæ, areolis oblongis. *Frons fertilis* sterili triplo minor, squamis nullis.

Capsulæ totam inferiorem partem, costa excepta, tegentes, fuscæ vel flavo-fuscæ, pedicellatæ, annulo crasso incompleto cinctæ.

Semina oblonga, subreniformia.

Fig. 1. Capsulæ. f. 2. Semina. f. 3. Squama, e margine frondis:—*magn. auct.*

This seems in every essential particular to accord with the *A. hybridum* of Bory, who found the plant in the Isle of Bourbon, and whose name we have here adopted. We have received the same plant from Dr. Sieber, under the name of *A. villosum* of Swartz, which, besides being a native of Jamaica, is described as having the sterile fronds on both sides, and the fertile one on the upper surface, clothed with hairs; and so Plumier figures them. It is also the *A. ciliare* of Capt. Carmichael, and probably of Du Petit Thouars.

Acrostichum obtusatum.

F. Fraulé del.

J. Swan. Sculpt.

TAB. XXII.

ACROSTICHUM OBTUSATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ACROSTICHUM*, Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ vel setæ in quibusdam capsulis interstinctæ). *Br.*

Acrostichum *obtusatum;* frondibus simplicibus piloso-squamosis, squamulis subulatis sparsis; sterilibus oblongis, fertilibus ovatis, stipitibus hispidis. *Carm.*

Acrostichum obtusatum. *Carm. in Descr. of the Island of Tristan da Cunha, in Linn. Trans. v.* 12. *p.* 510.

Hab. In planitiis ad rupes excelsas montis Insulæ Tristan da Cunha. *D. Carmichael.*

Radix, nobis ignota.

Stipes erectus, flexuosus, triuncialis, inferne glaber, superne plerumque hispidus, pilis vel squamulis lineari-lanceolatis, horizontalibus, obscure reticulatis serrulatis fuscis.

Frons sterilis vix sesquiunciam longa, ovalis vel etiam elliptica, nunc ovata, subundulata, coriacea, integerrima, apice obtusiuscula, pilis vel squamulis sparsis, plerumque versus basin frondis, obsita: *fertilis* minor, plerumque ovalis, facie superna margineque squamuloso-pilosis.

Capsulæ totam paginam inferiorem frondis tegentes, intense fuscæ, sublonge stipitatæ, annulatæ, *annulo* lato, incompleto.

Semina numerosa, parva, subsphærica, margine tuberculato.

Fig. 1. Plantæ, *magn. nat.* f. 2. Squamula. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

Discovered in the Island of Tristan da Cunha by Captain Carmichael of Appin, to whom we are indebted for our specimens. We know not that it has been noticed by any other author.

Acrostichum flagelliferum

TAB. XXIII.

ACROSTICHUM FLAGELLIFERUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ACROSTICHUM,* Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ vel setæ in quibusdam capsulis interstinctæ). *Br.*

Acrostichum *flagelliferum;* fronde pinnata, pinnis paucis remotis lanceolatis (magis minusve latis) breviter petiolatis, terminali longissima flagelliformi.

Acrostichum flagelliferum. *Wallich MSS.*

Panna Mara-maravara. *Rheede, Hort. Malab. v.* 12. *p.* 39. *t.* 19.

Hab. In India Orientali. *Rheede. Wallich.*

"*Caudex* ab una parte excurrit, curvus, nodosus, exterius fuscus, interius rufus, lignosus, plurimis fibris capillisque nigris, circa inferiorem partem coriaceus, hirsutie, cui se corticibus arborum affigit, obsessus, odoris gravis et ingrati, saporis amari." *Rheede.*

Stipes altitudine variat, non raro pedalis, glaber, fuscus, hinc canaliculatus: *rachis* etiam glaber.

Frons, circumscriptione, lanceolata, pinnata, pinnis remotis, 5—9, nunc oppositis, nunc alternis, *sterilibus* ovali-lanceolatis, *fertilibus* lanceolatis, basi in petiolum brevem attenuatis, apice magis minusve acuminatis, costatis, simpliciter paralleli nervosis, marginibus undulatis nunc subcrenatis, ubique glabris; *terminali* longissima non raro pedali, attenuata, recurva, et, ut nobis videtur, quandoque prolifera, radicante.

Capsulæ nunc totam inferiorem partem omnium pinnarum tegentes, nunc magis minusve interruptæ et intra nervos a margine decurrentes, intensæ, fuscæ, pedicellatæ, annulo fere completo.

Semina minutissima, oblonga, glabra.

Fig. 1. Capsulæ. f. 2. Semina:—*magn. auct.*

This highly remarkable Fern was communicated to us by Dr. Wallich from the Calcutta Botanic Garden, with the MS. name here adopted, and a reference to the very tolerable figure in the *Hortus Malabaricus.* It is there celebrated as a medicinal plant of no ordinary virtue: "Cum saccharo in syrupum redacta, tussim, morbum endemium, omnia pulmonum vitia, dispnœam, morbum lunaticum, phthysin curat."

Gymnogramma cheilanthoides

TAB. XXIV.

GYMNOGRAMMA CHEILANTHOIDES.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *GYMNOGRAMMA,* Desv. *Sori* oblongi venis frondis simplicibus furcatisve inserti. *Indusium* nullum. *Frondes* pinnatæ, bipinnatæ decompositæque; *radices* cæspitosæ. *Desv.*

Gymnogramma *cheilanthoides;* fronde pinnata, pinnis sub-bipinnatifidis, laciniis oblongis obtusis rachique pilosis.

Gymnogramma cheilanthoides. *Kaulf. Enum. Fil. p.* 71.

Gymnogramma filipendulæfolia. *Desv. Journ. de Bot.* 1813. *p.* 25.

Grammitis cheilanthoides. *Swartz. Syn. Fil. p.* 23. 219 *et* 419. *Willd. Sp. Pl. v.* 5. *p.* 143. *Carmich. in Descr. of the Island of Tristan da Cunha, in Linn. Trans. v.* 12. *p.* 510.

Asplenium filipendulæfolium. *Pet. Th. Trist. d'Acugn. p.* 34. *t.* 4.

Hab. In Insula Mauritii. *Swartz.* Tristan da Cunha. *Pet. Thouars. Carmichael.*

Stipes gracilis, lævis, nitidus, hinc sulcatus, nigro-purpurascens, 4—5 uncias longus.

Frons, circumscriptione, lineari-lanceolata, pinnata, pinnis membranaceis, flavo-viridibus, arcte dispositis, ovato-cordatis, vix pollicem longis, profunde pinnatifidis; segmentis superioribus integris vel bifidis, inferioribus iterum pinnatifidis, omnibus oblongis obtusis subincurvis, dorso venisque subtus pilosis.

Rachis superne pilosus, inferne glaber.

Sori oblongi, venis lateralibus simplicibus vel furcatis inserti, indusio omnino destituti.

Capsulæ brevissime pedicellatæ, annulo incompleto.

Semina parva, triangularia.

Fig. 1. Pinna cum portione rachidis. f. 2. Portio pinnæ cum capsulis. f. 3. Capsula dehiscens. f. 4. Semina:—*magn. auct.*

In those *Grammitides* of Swartz and Willdenow, which have much divided fronds, the nerves are more decidedly furcate than in those with simpler fronds, and the sori have this forked character likewise. These species are removed by Desvaux, and we think with propriety, to the genus *Gymnogramma.* The present is one of the most rare and the most beautiful of the genus. Our specimens were received from Captain Carmichael, who gathered them at a considerable elevation on the face of the Table-land, and on a detached hill in the middle of the plain, in Tristan da Cunha.

Gymnogramma leptophylla

TAB. XXV.

GYMNOGRAMMA LEPTOPHYLLA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *GYMNOGRAMMA,* Desv. *Sori* oblongi, venis frondis simplicibus furcatisve inserti. *Indusium* nullum. *Frondes* pinnatæ bipinnatæ decompositæque; *radices* cæspitosæ. *Desv.*

Gymnogramma *leptophylla;* frondibus bipinnatis, pinnulis cuneatis decurrentibus subtrilobis, lobis obtusis bifidis bidentatisve.

Gymnogramma leptophylla. *Desv. Journ. de Bot.* 1813. *p.* 26. *Kaulf. Enum. Fil. p.* 81.

Grammitis leptophylla. *Swartz. Syn. Fil. p.* 23 *et* 218. *t.* 1. *f.* 6. *Willd. Sp. Pl. v.* 5. *p.* 143. *Web. et Mohr Fl. Crypt. Germ. p.* 26.

Hemionitis leptophylla. "*Lagasca Gen. et Sp. p.* 33."

Polypodium? leptophyllum. *Linn. Sp. Pl. p.* 1553. *Schkuhr Fil. p.* 26.

Acrostichum leptophyllum. *DeCand. Fl. Fr. v.* 2. *p.* 565.

Asplenium leptophyllum. "*Cav. in Annal. Sc. Nat. v.* 5. *p.* 13. *t.* 41. *f.* 3. mala."

Osmunda leptophylla. *Lam. Dict. v.* 4. *p.* 657.

Hab. In Europa australi, locis humidis.

Radix parva, cæspitosa, e fibris nigrescentibus arachnoideo-tomentosis.

Stipites erecti, glabri, nitidi, graciles, hinc sulcati, basi castanei, superne virides.

Frondes circumscriptione ovato-lanceolatæ, bipinnatæ, teneræ, membranaceæ, pallide virides, pinnis ovatis, alternis, distantibus, patentibus, pinnulis cuneatis alternis decurrentibus trilobis, lobis nunc bifidis, plerumque emarginatis obtusis, pinnulis frondium sterilium majoribus.

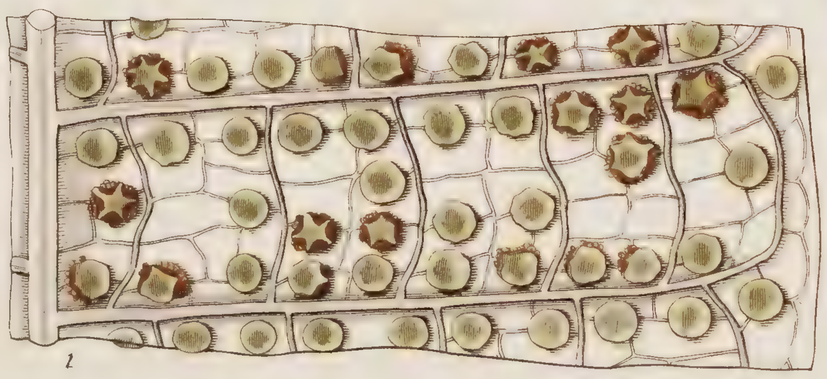
Sori in singulo segmento pinnularum venulis inserti, oblongi, non raro basi uniti, e capsulis numerosis fuscis, brevissime pedicellatis, annulo fere completo cinctis.

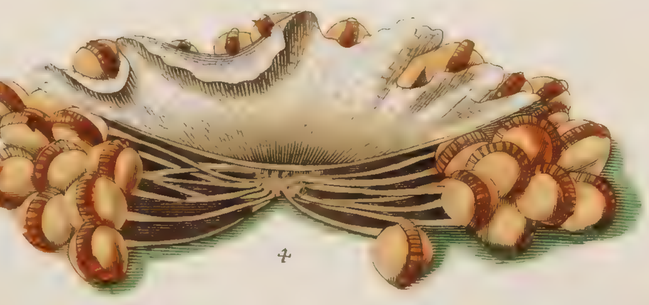
Semina numerosa, triangularia.

Fig. 1. Pinnula ab inferiore parte visa, cum lineolis fructificantibus. f. 2. Sorus, capsulis plurimis abductis. f. 3. Capsula dehiscens, cum ejus seminibus. f. 4. Semina:—*magn. auct.*

A species confined, we believe, wholly to the South of Europe.

The specimens from which our figures and description were made, were gathered by M. Thomas, of Bex, in the Pyrenées.





Aspidium Singaporianum

Sweerille. del.

J. Swan. Lith.

TAB. XXVI.

ASPIDIUM SINGAPORIANUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ASPIDIUM,* Br. *HYPOPELTIS,* Mich. *ASPIDII species,* Sw., Willd.
Sori rotundi, dorsales. *Involucrum* orbiculare, peltatum, stipitatum, in medio sori insertum, undique liberum. *Br.*

Aspidium *Singaporianum;* fronde simplici stipitata late lanceolata acuminata integerrima, basi decurrente, soris in venis ternariis, capsulis longe pedicellatis.

Aspidium Singaporianum. *Wallich MSS.*

Hab. In insula, Singapore dicta. *Wallich.*

Caudex repens, sublignosus, hic illic radiculosus.

Stipes erectus, 4—8-pollicaris, teres, glaber, nigro-fuscus, hinc sulcatus, inferne subsquamosus.

Frons octo uncias longa, late lanceolata, submembranacea, utrinque glabra, margine omnino integerrima, apice acuminata, basi decurrens, costata, venisque lateralibus rectis subobliquis instructa. Ex his venis aliæ venæ, venulis fructiferis reticulatæ, ortæ sunt.

Sori numerosi, fusci, venis ternariis siti, parvi.

Involucrum exacte orbiculare, medio depressum, membranaceum, peltatum, vix stipitatum, demum, marginibus solutis, subrecurvis, undulatis.

Capsulæ sphærico-compressæ, annulo integro cinctæ, reticulatæ, longe pedicellatæ.

Semina subsphærica, reticulata, limbo subpellucido marginata.

Fig. 1. Portio frondis, cum soris. f. 2. Sorus vix maturus. f. 3. Sorus maturus. f. 4. Ejusdem sectio. f. 5. 5. Capsulæ. f. 6. Semina.

In the character we have here given of *Aspidium,* we have in view the adopting Michaux's and Mr. Brown's idea of separating the old *Aspidium* of Swartz into three genera, *Aspidium, Nephrodium,* and *Athyrium.* We have not yet ourselves had sufficient experience to determine how far their characters are well defined; but feeling the necessity of grouping into something more than divisional characters the overgrown genus *Aspidium,* we willingly follow such able botanists as those now quoted.

Of the original *Aspidia,* three only are described by Willdenow with "undivided fronds;" and they have all an articulated or jointed stipes. There is a fourth species with a stipes destitute of joint given in the Exotic Flora, *Asp. Wallichii,* Hook.: but that would be a *Nephrodium* of Brown, and has the sori confined to a line on each side the midrib; whereas here the fructifications are very numerous, arising, as in some *Polypodia,* from the ultimate divisions of the veins: and indeed the whole plant has much the appearance of a *Polypodium.*

We are indebted for our specimens to our liberal friend Dr. Wallich.

Asplenium subsinuatum

TAB. XXVII.

ASPLENIUM SUBSINUATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ASPLENIUM,* Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. *Br.*

Asplenium *subsinuatum;* fronde simplici longe stipitata lanceolata basi apiceque attenuata obscure nervosa, margine suberoso-sinuata.

Asplenium rigidum. *Wallich MSS.* (non Swartzii.)

Hab. In Nepalia. *Wallich.* In Zeylona (Herb. nostr.).

Caudex repens, sublignosus, rigidus, fibrosus, nigrescens, setosus.

Stipes 4—6-pollicaris, flexuosus, gracilis, basi setaceo-squamosus.

Frondes 6—8-pollicares, coriaceæ, lanceolatæ, apice acuminatæ, basi in stipitem attenuatæ, margine læviter reflexæ, suberoso-sinuatæ, costatæ, obscure nervosæ, nervis patentibus parallelo-ramosis.

Sori lineares, transversales, fere ad marginem frondis attingentes.

Involucra pleraque superne aperientia; raro geminata (ut in *Diplazio*), et tunc alterum ad latus inferum dehiscet.

Capsulæ numerosæ, longe stipitatæ, annulo fere completo.

Semina sphærica, subangulata.

Fig. 1. Frondis portio cum soris. f. 2. 2. Capsulæ. f. 3. Semina.

To the specimens with which we have been favoured by the Honourable the East India Company in 1825, the name *Asplenium rigidum* of Wallich is attached: and we should have adopted this, had it not been applied by Swartz to a very different species. Again, the name of *Aspidium erosum*, Wall., which accompanied Dr. Wallich's original specimens in 1820, is given by Linnæus to a West Indian species.

It is intermediate between *Asplenium* and *Diplazium;* the main central nerve of a fascicle of nerves, as it appears to us, bearing the involucra of a *Diplazium*, while the lateral nerves on branches have those of *Asplenium.*

Pteris denticulata

— Macdonald del. —

— J. Swan Sculpt —

TAB. XXVIII.

PTERIS DENTICULATA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *Sori* lineares, marginales, continui; *capsulis* sinu involucri insertis. *Involucrum* marginale, continuum, scariosum, intus liberum. *Br.*

Pteris *denticulata;* frondibus pinnatis, pinnis decurrentibus suboppositis, duobus vel tribus paribus inferioribus margine exteriore (præcipue) pinnatifidis raro bipinnatifidis setoso-dentatis, fertilibus ad apicem solummodo denticulatis.

Pteris denticulata. *Sw. Fl. Ind. Occ. v.* 3. *p.* 1600. *Sw. Syn. Fil. p.* 97. *Kaulf. Enum. Fil. p.* 187.

Pteris brasiliensis. *Raddi Syn. Fil. Brasil. n.* 111. *Raddi Fil. Brasil. p.* 47. *t.* 68 (bis).

Pteris quadrifida. *B. Presl. in Del. Prag.* 1. *p.* 182. *num.* 32 (fide Raddi).

Pteris tristicula. *Raddi Fil. Brasil. p.* 46. *t.* 69?

Hab. In lapidosis umbrosis Hispaniolæ. *Swartz.* In Brasilia. *Chamisso, Raddi, Burchell, D^a Maria Graham.* Cult. In Hort. Bot. Liverpool.

Caudex non vidimus, sed teste cel. Raddi, "subnullus, radiculis numerosis filiformibus flexuosis rigidis instructus, apice dense squamuloso, squamulis lanceolato-acuminatis, denticulatis, nigris."

Stipites 6—8-pollicares ad pedalem, graciles, tetragoni, utrinque canaliculati, glabri, superne subalati.

Frondes pedales, nunc, fide Raddi, bipedales, circumscriptione ovatæ, vel deltoideæ, pinnatæ. *Pinnæ* plerumque exacte oppositæ, lanceolatæ, acuminatæ, costatæ, reticulatæ; *superiores* decurrentes, *reliquæ* magis minusve petiolatæ; *intermediæ* ad basin divisæ, *infimæ* margine exteriore (nunc interiore) pinnatifidæ, laciniis rarissime divisis. *Pinnæ* omnes, planta *sterili*, margine dentatæ, dentibus setosis, *fertili*, ad apicem, solummodo, dentato-spinulosis. *Rachis petiol*ique alati, superiore parte præcipue.

Sori continui, omnem marginem, præter apices, occupantes.

Capsulæ in sinubus involucri numerosæ, sphæricæ, annulatæ, longissime pedicellatæ, pedicello gracili, articulato, celluloso.

Semina triangularia, granulis minutissimis immixta.

Fig. 1. Frons fertilis. f. 2. Frons sterilis. f. 3. Pinnæ portio cum soro. f. 4. Sorus, intus visus. f. 5. Capsula. f. 6. Semina cum granulis:—*magn. auct.*

If we are not deceived, this is a plant liable to considerable variation. We know, from specimens received from the author, as well as from the description and figure, that it is Raddi's *Pt. Brasiliensis:* but then we equally believe it to be the *Pt. denticulata* of Swartz and Willdenow. And we have in our own possession such a series of specimens, as almost make us believe that the *Pt. tristicula* of Raddi, and even his *Pt. spinulosa*, are states of the same plant.

The Messrs. Shepherds of the Liverpool Botanic Garden cultivate this plant in the stove: and it is well worthy a place in every collection.

Cryptogramma acrostichoides

Greville del.

CRYPTOGRAMMA ACROSTICHOIDES.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. ***CRYPTOGRAMMA,*** Br. *Sori* lineares (vel subrotundi) venulis costæ (pinnulæ) obliquis insidentes. *Capsulæ* pedicellatæ, receptaculo communi elevato nullo. *Involucrum* commune (pinnulæ) marginale, continuum, disco venoso, margine scarioso libero sæpius induplicato; partiale nullum.

Filiculæ *glabellæ.* Frondibus *cæspitosis bi-tripinnatifidis: centralibus mutato-contractis fertilibus, exterioribus sterilibus.* Involucris *dorsum totum pinnulæ tegentibus.* Capsulis *breve pedicellatis, annulo incompleto:* sporulis *obtuse trigonis, lævibus.* Br.

Cryptogramma *acrostichoides;* frondibus bipinnatifidis, sterilium pinnulis ovalibus crenatis; fertilium demum explanatis, soris linearibus discum totum occupantibus. *Br.*

Cryptogramma acrostichoides. *Brown in App. to Franklin's Journ. p.* 797.

Hab. Apud Nootka Sound. *D. Menzies.* Regione subarctica Americæ Septentrionalis, in sylvis opacis scopulosis inter lat. Septentr. 56° et 60°. *Richardson.*

"*Filix* 4—8-uncialis, glabra, læte-virens, frondibus cæspitosis, stipitatis, crasso-membranaceis opacis venis vix adversus lucem conspicuis.

"*Frondes* exteriores cæspitis *steriles,* circumscriptione lanceolatæ, bipinnatifidæ apice pinnatæ pinnis distinctis alternis brevissime petiolatis; pinnulis confluentibus, ovalibus, obtusis, crenatis, inferioribus passim dentatis, omnium venis e costa vix prominula acutangulis distinctis simplicibus bifidisve intra marginem crenaturæ desinentibus. *Stipites* pallidi, subtus semiteretes, antice bisulci, infra medium conspersi, squamulis lineari-lanceolatis acuminatis, disco fusco-atro, limbo pallido, supra glabri. *Rachis* epaleata, angusta, compressa, colore et fere substantia frondis. Frondes centrales *fertiles* stipite sterilium longiore alioqui simili insidentes bipinnatæ: pinnæ petiolatæ; *pinnulæ* omnes fructiferæ distinctæ inferiores brevissime petiolatæ; ante explicationem involucri lineares, limbo utrinque recurvo, efformante *involucrum* fornicatum discum totum operiens pallide viride venosum margine scarioso avenio sæpius induplicato: demum explanatæ angusto-oblongæ involucro quasi nullo: costa subtus particulis parvis flavis conspersa, venis costæ obliquis, alte bifidis, fere bipartitis distinctis.

"*Sori* ramulos omnes venarum a basi ad apicem occupantes, lineares, distincti sed ita approximati ut discus totus pinnulæ explanatæ capsulis maturus tectus est et in hoc stadio filix species *Grammitidis* vel *Acrostichi* quasi evadit.

"*Capsulæ* breve pedicellatæ, turgide lenticulares annulo incompleto, altero lateri infra annuli terminationem transversim dehiscentes, *receptaculo* communi elevato nullo sed venæ parum incrassatæ insidentes.

"*Sporulæ* triangulares, læves, absque striis manifestis vel puncto opaciori, in cumulo dilute flavæ separatim hyalinæ." *Br.*

Fig. 1. Pinnulæ duæ fertiles, involucris adhuc involutis. f. 2. Portio pinnulæ transversim secta. f. 3. Pinnula, involucris explanatis. f. 4. Portio pinnulæ, cum soris. f. 5. Capsulæ. f. 6. Semina vel Sporulæ:—*magn. auct.*

To so admirable a description of this plant as that here copied verbatim from Mr. Brown, we can add nothing. We believe the plant has never been found except in the stations above given. Mr. Brown has drawn up the character of the genus so as to include our *Pteris crispa;* which he, nevertheless, considers a doubtful species of *Cryptogramma.* To us, however, there appears no generic difference; and the fertile fronds have the closest similarity, in almost every particular, except in the rather shorter *sori* of *capsules.* In the sterile fronds the pinnules are much broader and never wedge-shaped, in the plant now before us.

Adiantum cuneatum

Dr. Greville. del

J. Sowerby. Sculpt.

TAB. XXX.

ADIANTUM CUNEATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *Sori* marginales, punctiformes vel lineares. *Involucrum* e margine frondis replicato, disco venoso capsulifero, limbo membranaceo libero. *Br.*

Adiantum *cuneatum;* frondibus triplicato-pinnatis, pinnulis petiolatis cuneatis membranaceis apice rotundatis laciniato-bi-trilobatis, lobis profunde emarginatis segmentis falcato-incurvis, sinubus soriferis, involucris reniformibus.

Adiantum cuneatum. "*Langsd. et Fisch. Ic. Fil. p.* 23. *t.* 26." *Willd. Sp. Pl. v.* 5. *p.* 450. *Raddi Fil. Brasil. p.* 59. *t.* 78. *f.* 2. *Kaulf. Enum. Fil. p.* 206.

Hab. In Brasilia. *Langsdorff et Fischer, Chamisso, D^a M. Graham, Burchell.* Insula Sancti Vincentii. *Rev. L. Guilding.* Cult. In Hort. Bot. Liverpool.

Radix subcæspitosa, fibrosa, fibris ramosis, tomentosis.

Caudex digitalis ad palmarem, erectus, gracilis, atropurpureus, nitidus.

Frons, circumscriptione, ovata vel subdeltoidea, triplicato-pinnata.

Rachis petiolique gracillimi, atro-purpurei, nitidi.

Pinnulæ breviter petiolatæ, duas ad quatuor lineas longæ, membranaceæ, glabræ, dichotomo-nervosæ, cuneatæ, lateribus nunc inæqualibus, apice inciso-lobatæ, lobis duobus vel tribus; in *frondibus sterilibus,* subdentatæ; in *fertilibus,* profunde emarginatis, segmentis falcato-incurvis, sinubus fructiferis.

Involucrum exacte reniforme membranaceum, pallide fuscum, majusculum, arcte inflexum.

Capsulæ in disco involucri, sphæricæ, fere sessiles, reticulatæ, annulatæ, annulo incompleto.

Semina oblongo-rotundata, vel subreniformia.

Fig. 1. Planta juvenis. f. 2. Planta adulta fructifera:—*magn. nat.* f. 3. Pinnula. f. 4. Involucrum, intus visum. f. 5. Capsula. f. 6. Semina:—*magn. auct.*

There appears to us to be great difficulty in determining the species of the genus *Adiantum* without the aid of figures; especially of that division which includes our European *A. Capillus Veneris,* and which division or group is characterized by having petiolated pinnules of a thin membranaceous texture, and more or less regularly cuneate in form.

The present plant is allied in general appearance to the species just mentioned, *A. Capillus Veneris,* but may be distinguished by its more compound frond, smaller pinnules, and, essentially, by the sori being placed in the bottom of the sinus of the notches. Still nearer does it approach to the *A. assimile* of New Holland (the *A. trigonum* of Billardière, *Nov. Holl. t.* 248.); and I scarcely know how they may be recognized, but by the more decided lobes of the pinnæ of our plant, and the much deeper notches, within which the fructification is inserted: add, too, that the segments of these lobes are so incurved and meet together in such a manner as to render the notch itself almost obsolete; so that at first sight the involucra seem to be intramarginal, or upon the disk of the pinnulæ.

In Brazil, the *A. cuneatum* appears to be not uncommon; and we have received an *Adiantum,* which we can in no way distinguish from it, from St. Vincent, sent by the Rev. L. Guilding. The Messrs. Shepherds received the plant from M. Otto of Berlin, under the name of *A. pendulinum.*

Trichomanes reniforme

TAB. XXXI.

TRICHOMANES RENIFORME.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *TRICHOMANES,* Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *reniforme;* frondibus reniformibus integerrimis stipitatis.

Trichomanes reniforme. *Forst. Prodr. n.* 462. "*Hedw. Fil. fasc.* 3." *Swartz. Syn. Fil. p.* 141. *et p.* 369. *Willd. Sp. Pl. v.* 5. *p.* 499.

Hab. In Nova Zeelandia. *Forster. Menzies.* In sylvis densis ad ripam fluminis "Thames" dicti: parasiticum. *Fraser.*

Caudex longe repens, gracilis, subtortuosus, ramosus, glaber, radiculosus, arboribus adnascens.

Stipites digitales, alterni, plurimi ex eodem caudice, remoti, subcurvati, superne paululum dilatati, omnino glabri.

Frondes simplices, fere exacte reniformes, duas tres ad quatuor uncias longæ, quatuor ad quinque uncias latæ, integerrimæ, coriaceo-membranaceæ, diaphanæ, nervis pluries dichotomis, e basi divergentibus, seu flabellatim dispositis.

Sori ad marginem frondis, arcte dispositi, ad apicem singuli nervi.

Involucrum turbinatum fronde immersum, margine integerrimum.

Receptaculum cylindraceum, in speciminibus exsiccatis sublonge exsertum, et capsulis *undique* tectum.

Capsulæ globosæ, pulcherrime reticulatæ, annulo lato completo cinctæ.

Semina globosa vel triangularia, singulo e tribus corpusculis composito.

Fig. 1. Planta:—*magn. nat.* f. 2. Involucra dua. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

This singular and very beautiful Fern is, we believe, entirely confined to New Zealand, where it climbs over the trunks of trees. We have received it from Mr. Menzies; but our finest specimens were recently sent to us by Mr. Fraser, the colonial botanist in New South Wales.

The substance of the frond is rather thick, and it is pellucid, and of that nature which would lead to the suspicion of its having, in a fresh state, been succulent. In drying, therefore, the specimens may have shrunk considerably, especially at the margins; and to this circumstance, perhaps, may be attributed the exserted state of the capsules.

Trichomanes reptans

TRICHOMANES REPTANS.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. ***TRICHOMANES,*** Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *reptans;* frondibus erectis simplicibus cuneato-ovatis incisis pinnatifidisve arcte venosis, involucris paucis terminalibus exsertis bilabiatis, receptaculo subincluso.

Trichomanes reptans. *Swartz. Fl. Ind. Occ. v.* 3. *p.* 1727. *Syn. Fil. p.* 142. *Willd. Sp. Pl. v.* 5. *p.* 501. "*Hedw. Fil. t.* 3. *f.* 4." (mala Willd.)

Trichomanes minor repens, &c. *Brown Jamaica, p.* 86.

Phyllitis scandens minima &c. *Sloane Jam. v.* 1. p. 74. *t.* 27. *f.* 1?

Hab. In arborum truncis vetustis cortici adnascens Jamaicæ. *Swartz.* Insula Sancti Vincentii. *Rev. L. Guilding.*

Caudex longe repens, gracilis, filiformis, radicibus tomentosis dense obsitus.

Stipites breves, vix semiunciam longi, ferrugineo-tomentosi.

Frondes plurimæ, pollicares, ovatæ, obovatæve nunc rotundatæ, basi semper cuneatæ, marginibus apiceque varie modo crenatis lobatis incisisve, hic illic fasciculatim pilosis, pilis minutissimis reflexis. *Substantia* tenera, membranacea, minutissime reticulata, pulcherrime venosa, vix costata, sed venis e basi versus margines radiatim, vel potius flabellatim ramosis. *Color* læte viridis, nunc fuscescens.

Involucra solitaria vel bina, ad apicem frondis, plerumque in sinu lobulorum, fere omnino exserta, cylindracea, nuda, vel, inferne, marginibus utrinque alatis, apice bilabiata, labiis subrotundatis demum apertis.

Receptaculum filiforme, nostris speciminibus nunquam exsertum, medio capsuliferum.

Capsulæ oblique insertæ, sessiles, annulo completo instructæ.

Semina subsphærica.

Fig. 1. Frondes duæ cum portione caudicis. f. 2. Involucrum. f. 3. Involucrum, verticaliter sectum. f. 4. Portio columellæ, cum capsulis duabus. f. 5. Pili marginis frondis:—*magn. auct.*

Numerous beautiful specimens, received from our friend the Rev. Lansdown Guilding, of this minute Fern, enable us to give what we trust will be found to be satisfactory figures of this little known, though we believe not uncommon, species. The only ones that exist, that we are aware of, are, that of the younger Hedwig, which is acknowledged by Willdenow and Smith to be bad; and that of Sloane, which, though usually (and even by Swartz) quoted under *Tr. muscoides*, we think is better referred to this.

We have reason, indeed, to believe that the *Tr. muscoides* and *reptans* have been confounded by botanists; but the former differs from the latter (as we propose on another occasion to show more clearly by a plate) by its narrower, more beautifully reticulated and less veined frond, in the substance of which the involucres are inserted. We have another nearly allied species from Guiana, gathered by Mr. Parker, in which there is a strong nerve, having only as many divisions as there are lobes to the frond.

Trichomanes lanceum

J. Swan. Sculpt.

TAB. XXXIII.

TRICHOMANES LANCEUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. ***TRICHOMANES,*** Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *lanceum;* frondibus stipitatis linearibus pinnatifido-digitatis, laciniis linearibus inæqualibus elongatis obtusis setoso-serratis. *Willd.*

Trichomanes lanceum. "*Bory in Litt.*" *Willd. Sp. Pl. v.* 5. *p.* 501. *Sieber, Syn. Fil. n.* 81.

Trichomanes digitatum. *Swartz. Syn. Fil. p.* 422 *et* 370.

Hab. In Insula Borboniæ. *Bory de St. Vincent.* Insula Mauritii. *Sieber.*

Caudex tenuissimus, filiformis, setosus.

Stipes erectus, 3—4 lineas longus, setis horizontalibus sparsis obsitus.

Frondes bipollicares di-trichotomæ, nunc subpinnatifidæ pinnis vel laciniis 4, segmentis linearibus costatis pulcherrime reticulatis, marginibus ciliatis, ciliis vel pilis remotis, articulatis.

Sori solitarii ad apicem segmentorum frondis.

Involucrum substantia frondis immersum, turbinatum, subcompressum, ore aperto.

Receptaculum involucro duplo longius, filiforme, ad basin capsuliferum.

Capsulæ rotundatæ, compressæ, annulo lato completo cinctæ.

Semina angulata, e granulis tribus nunc quatuor composita.

Fig. 1. Plantæ:—*magn. nat.* f. 2. Frons cum portione caudicis. f. 3. Apex frondis fertilis. f. 4. Pars inferior receptaculi, cum capsulis. f. 5. Capsulæ. f. 6. Semina:—*magn. auct.*

The specimens from which our figure and description of this pretty little Fern were taken are published in the *Synopsis Filicum* of Dr. Sieber, and were gathered by him in the Mauritius.

Hymenophyllum marginatum

TAB. XXXIV.

HYMENOPHYLLUM MARGINATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *HYMENOPHYLLUM,* Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, texturâ frondis, valvis planis, exterius liberis. *Br.*

Hymenophyllum *marginatum;* frondibus erectis di-trichotomis laciniis linearibus obtusissimis subundulatis marginatis integerrimis, involucris terminalibus solitariis rotundatis, marginibus incrassatis integerrimis.

Hab. In Nova Hollandia, prope Port Jackson, inter Muscos. *Fraser.*

Caudex gracillimus, filiformis, pilosus, repens.

Stipes duas tres lineas longus, erectus, filiformis, basi pilosus.

Frondes pollicares, sesquipollicares, di-trichotomæ, membranaceæ, pulcherrime reticulatæ, areolis minutis rotundatis, costatæ, basi attenuatæ, laciniis linearibus, subundulatis marginatis, integerrimis, apice, *frondium sterilium,* obtusis, *fertilium* emarginatis.

Sori in sinu, ad apicem laciniarum, solitarii.

Involucrum rotundatum, bivalve, valvis subconvexis reticulatis integerrimis, marginibus incrassatis pulcherrime rubris.

Receptaculum filiforme, involucro brevius, apice liberum.

Capsulæ rotundatæ, compressæ, peltatæ, annulatæ, annulo integro.

Fig. 1. Plantæ:—*magn. nat.* f. 2. Frons, cum portione caudicis. f. 3. Frondis apex cum soro. f. 4. Capsula:—*magn. auct.*

At first sight, and with the eye unaided by a microscope, this plant has very much the appearance of *Trichomanes lanceum;* but a more careful examination will show it to be very distinct, even as to its genus: the involucrum here being completely that of a *Hymenophyllum,* and the margin wants the ciliæ of that plant,—being furnished instead with a thickened margin.

We have only received specimens from Mr. Fraser, gathered in New Holland, and, we believe, in the neighbourhood of Port Jackson.

Hymenophyllum ciliatum

TAB. XXXV.

HYMENOPHYLLUM CILIATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *HYMENOPHYLLUM,* Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, textura frondis, valvis planis, exterius liberis. *Br.*

Hymenophyllum *ciliatum;* frondibus lanceolatis pinnatis pinnis bipinnatifidis laciniis linearibus obtusis, marginibus costaque ciliatis, ciliis bi-trifurcatis, rachi stipiteque alatis ciliatis.

Hymenophyllum ciliatum. *Swartz. Fl. Ind. Occ. v.* 3. *p.* 1753. *Syn. Fil. p.* 147. *Willd. Sp. Pl. v.* 5. *p.* 519.

Trichomanes ciliatum. "*Hedw. Fil.*"

Hab. In truncis arborum montium Jamaicæ, inque Antillis minoribus et Pennsylvania. *Willd.*
In Insula Sancti Vincentii. *Rev. L. Guilding.*

Caudex longe repens, gracilis, filiformis, hic illic radiculosus, ferrugineo-pilosus.

Stipes unciam ad duas uncias longus, superne alatus.

Frondes, circumscriptione, lanceolatæ, nunc ovato-lanceolatæ, attenuatæ, membranaceæ, pulcherrime reticulatæ, pinnatæ, pinnis ovato-lanceolatis costatis bipinnatifidis, laciniis linearibus, apice plerumque bifidis, marginibus costaque ubique ciliatis, ciliis remotis, simplicibus bifidis trifurcatisve. *Rachis* alata, ciliata.

Involucra ad apicem laciniarum, solitaria, at præcipue pinnis superioribus, orbicularia, bivalvia, valvis concavis marginibus ciliatis.

Receptaculum breve, inclusum, ad ejus apicem capsuliferum.

Capsulæ 10—12 in singulo soro, rotundatæ, subcompressæ, sessiles, obliquæ.

Semina minuta, subsphærica, fusca.

Fig. 1. Involucrum. f. 2. Involucrum, valva unica desumpta, cum soro. f. 3. Receptaculum cum capsulis duabus. f. 4. Semina. f. 5. Ciliæ vel pili marginales.

Our specimens of this plant are from the Rev. Lansdown Guilding; and they agree entirely with the descriptions of Swartz and Willdenow.

Lygiopteris erecta

J. Swan. Sculp

TAB. XXXVI.

ANGIOPTERIS ERECTA.

FILICES.—Osmundaceæ. Div. II. *Bory.* Marattiaceæ. *Kaulf.* Schismatopterides. *Willd.*

Gen. Char. *ANGIOPTERIS*, Hoffm. *Sori* oblongi, transversi, in lineam submarginalem confluentes. *Capsulæ* discretæ, circiter 10—14, duplici serie dispositæ, ellipticæ, subcompressæ, antice poro oblongo hiantes. *Indusium* nullum. *Kaulf.*

Angiopteris *erecta.*

Angiopteris erecta. "*Hoffm. in Comm. Goett.* 12. *p.* 29. *t.* 5. exclusis syn. præter Forsteri." *Swartz. Syn. Fil. p.* 166 *et* 395. *Willd. Sp. Pl. v.* 5. *p.* 69.

Angiopteris indica. *Desv. Journ. Bot. t.* 1813. *p.* 267 ?

Clementea palmiformis. "*Cav. Prel.* 1802. *n.* 1164."

Polypodium erectum. *Forst. Prodr. n.* 438.

Hab. In Insulis Societatis et Marianis. *Willd.* In insula Otaheite. *D. Menzies.* Apud Sylhet, Indiæ Orientalis. *Dr. Wallich.*

Caudex, fide Willdenovii, arboreus, quinquepedalis, diametro spithamali; sed, secundum Gaudichaudium, omnino subterraneus.

Frondes "sesquipedales (*Willd.*), decem ad duodecim pedales (*Gaud.*), bipinnatæ."

Rachis lævis, teres, hinc, facie superna, sulcatus.

Pinnulæ 4—6-pollicares, alternæ, remotiusculæ, oblongo-lanceolatæ, subsessiles, basi magis minusve obtusæ, apice attenuatæ, marginibus serratæ, costatæ, venis numerosis parallelis simplicibus vel furcatis, supra intense virides, subtus pallidiores, ubique glabræ.

Sori oblongi, ad apicem fere omnium venularum (basi apiceque pinnularum exceptis) et ita arcte dispositi, ut lineam longitudinalem prope marginem efformant.

Capsulæ majusculæ, nudæ, circiter 10—14 in singulo soro; duplici serie dispositæ, erecto-patentes, obovatæ, obtusissimæ, sessiles, reticulatæ, dorso sulco depresso longitudinali notatæ, intus longitudinaliter dehiscentes. Inter capsulas *pili* pauci articulati.

Semina minutissima, sphærica, fusca.

Fig. 1. Portio pinnularum, cum ejus soris. f. 2. Sorus. f. 3. Sorus verticaliter sectus, interius visus. f. 4. Capsula, facie interiore visa. f. 5. Capsula a dorso visa. f. 6. Semina. f. 7. Pili e basi capsularum:—*magn. auct.*

The *Angiopteris indica* of Desvaux we have quoted as a synonym to the present species with a mark of doubt. All the character given is "*frondibus pinnatis, pinnis lanceolatis:*" and the observation is added, that it is easily distinguished from the already known species—"*n'etant point cordiforme-lancéolée.*" Our specimens are never cordiform at the base of the pinnules, but are generally obtuse, sometimes acute.

From Dr. Wallich again we have a plant marked "*Angiopteris, vix ab A. crassipeda,* Wall. *diversa.*" We are unacquainted with the *crassipeda* of Wallich; but of the plant just mentioned, except in its pinnules being narrower and considerably more attenuated than the figure here given, we do not see how it differs from *A. erecta.* Our Sylhet specimen exactly accords with Mr. Menzies' from Otaheite.

1

2

3

4

5

Lycopodium serratum

LYCOPODIUM SERRATUM.

LYCOPODINEÆ. *Swartz., Br., Kaulf.* STACHYOPTERIDES. *Willd.*

GEN. CHAR. *LYCOPODIUM,* Linn. *Capsulæ* uniloculares, axillares, sessiles; *aliæ* bivalves, farina repletæ; *aliæ* 2—3-valves, corpusculis 1—6, globosis. *Br.*

LYCOPODIUM *serratum;* foliis undique sparsis patentibus lanceolatis submembranaceis costatis cuspidatis petiolatis sinuato-serratis, caule adscendente dichotomo.

Lycopodium serratum. *Thunb. Fl. Jap. p.* 341. *t.* 38. *Swartz. Syn. Fil. p.* 175. *Willd. Sp. Pl. v.* 5. *p.* 51.

HAB. In Japonia. *Thunberg.* Insula Borboniæ. *Swartz.* Ex India Orientali misit *amicss. Wallich.* 1820.

Caulis 8—10-pollicaris, basi repens, radiculosus, dein adscendens, bis-terve dichotomus.

Folia undique sparsa, subremota, superne sensim majora, omnia horizontaliter patentia, vel subreflexa, fere membranacea, subunciam longa, lanceolata, plana, luteo-viridia, costata, costa excurrente, et inde folia cuspidata, marginibus sinuatis profunde serratis, basi in petiolum brevem alatum attenuata.

Capsulæ majusculæ, flavæ, in axillis foliorum supremorum, reniformes, bivalves.

Semina minutissima, subsphærica, reticulata, medio linea notata.

Fig. 1. Folium. f. 2. 3. 4. Capsulæ magis minusve maturæ. f. 5. Semina vel Granulæ:—*magn. auct.*

Thunberg's figure affords a very indifferent representation of this *Lycopodium,* which has the largest leaves of any species we are acquainted with. Our specimens are from Dr. Wallich; and coming to us at the same time with a collection of *Nepal* Ferns, although not marked as such, we judge they may be natives of Nepal also. If so, and being found, according to Swartz, in Bourbon as well as in Japan, this *Lycopodium* has a widely extended geographical range.

Lycopodium pulcherrimum

TAB. XXXVIII.

LYCOPODIUM PULCHERRIMUM.

LYCOPODINEÆ. *Swartz., Br., Kaulf.* STACHYOPTERIDES. *Willd.*

GEN. CHAR. *LYCOPODIUM,* Linn. *Capsulæ* uniloculares, axillares, sessiles; *aliæ* bivalves, farina repletæ; *aliæ* 2—3-valves, corpusculis 1—6, globosis. *Br.*

LYCOPODIUM *pulcherrimum;* caule dichotomo, foliis remotiusculis undique sparsis exacte linearibus acutiusculis integerrimis obscure costatis erecto-patulis, siccitate subflexuosis, capsulis in axillis foliorum supremorum.

Lycopodium pulcherrimum. *Wallich MSS.*

HAB. In monte Hatouna, Nepaliæ, arboribus (?). *Wallich.*

Radix valde fibrosa, fibris ramosis tomentosis intertextis fuscis.

Caules plurimi ex eadem radice, ut videtur, pendentes, 8—10-pollicares, dichotome divisi, ubique foliosi.

Folia sparsa, subremota, semiuncialia, erecto-patula, exacte linearia, glabra, integerrima, medio obscure costata, apice acutiuscula, *inferiora* plerumque fuscescentia, *superiora* viridia; omnia siccitate flexuosa atque etiam subtortuosa.

Capsulæ axillares, solitariæ, ad basin foliorum versus apicem ramorum, reniformes, flavæ, bivalves, granulis minutissimis pallide flavis repletæ.

Fig. 1. Folium. f. 2. Folium cum ejus capsula. f. 3. Capsula aperta cum granulis:—*magn. auct.*

Sent by Dr. Wallich from Nepal in 1820, marked as "*Cosca*" of the natives: and again we received it from the Honourable the East India Company with the MS. name of Dr. Wallich, which we have here adopted. It has the habit of our *Lyc. subulifolium;* but that has the leaves decidedly awl-shaped, and erect, and imbricated.

Lycopodium atro-viride J. Swan Sculp.

TAB. XXXIX.

LYCOPODIUM ATRO-VIRIDE.

LYCOPODINEÆ. *Swartz., Br., Kaulf.* STACHYOPTERIDES. *Willd.*

GEN. CHAR. *LYCOPODIUM,* Linn. *Capsulæ* uniloculares axillares, sessiles; *aliæ* bivalves, farina repletæ; *aliæ* 2—3-valves, corpusculis 1—6, globosis. *Br.*

LYCOPODIUM *atro-viride;* foliis bifariis horizontalibus acinaciformibus integerrimis vel serrulatis subcostatis striatis, stipulis ovatis costatis serrulatis longe mucronatis, spicis tetragonis sessilibus, squamis ovatis acutissimis carinatis serrulatis.

Lycopodium atro-viride. *Wallich MSS.*

Lycopodium cuspidatum. *Hook. MSS. apud Hort. Soc. Lond.*

HAB. In Insula "Prince of Wales Island" dicta, Indiæ Orientalis. *Wallich.*

Caulis, ut videtur, repens, pedalis et ultra, bi-tripinnatim ramosus, pallide fuscus, flexuosus sulcatus, hic illic radicans.

Folia bifaria, horizontalia, facie inferiore caulis inserta, rigida, nitida, arcte disposita, acinaciformia, obtusa, lineis tribus longitudinalibus notata, linea centrali e costa obscura, integerrima vel serrulata, intense viridia, subtus pallidiora.

Stipulæ foliis quintuplo minores, facie superiore caulis insertæ, appressæ, liberæ, foliis alternantes, ovatæ, acutæ, tenuissime marginatæ, serrulatæ, costatæ, costa longe producta, cuspidatæ.

Spicæ ad apices ramorum, solitariæ vel binæ, vix unciam longæ, tetraquetræ, e squamis viridibus, rigidis, ovatis, acute carinatis, imbricatis, patentibus, acutissimis, serrulatis, costa ad apicem attingente, dorso serrulata.

Capsulæ ovato-rotundatæ, flavæ, squamis breviores, axillares, solitariæ.

Semina minutissima, quaterna, flava.

Fig. 1. Portio caulis, facie superna visa. f. 2. Eadem, a dorso visa. f. 3. Stipula. f. 4. Spica. f. 5. Squama. f. 6. Squama cum capsula. f. 7. Capsula. f. 8. Semina:—*magn. auct.*

This very handsome species of *Lycopodium* we were first acquainted with by means of a valuable collection of dried specimens which the Horticultural Society of London had received from Prince of Wales Island; and in that collection we named the species *L. cuspidatum:* but having since received the same plant from the Honourable the East India Company under the name of *L. atro-viride* of Wallich (in all probability gathered in the same island by that gentleman), we hasten to adopt this appellation of our liberal friend.

A. Ophioglossum ellipticum

B. Oph: opacum.

TAB. XL. (A.)

OPHIOGLOSSUM ELLIPTICUM.

FILICES.—Ophioglosseæ. *Br., Kaulf.* Stachyopterides. *Willd.*

Gen. Char. *OPHIOGLOSSUM,* Linn. *Capsulæ* nudæ in spicam articulatam disticham connatæ, uniloculares, transverse dehiscentes, bivalves. *Willd.*

Ophioglossum *ellipticum;* spica caulina longe pedunculata, fronde elliptica obtusa reticulata medio costata, radice fibrosa.

Hab. In Demerara, Americæ meridionalis; legit et communicavit *amiciss. C. S. Parker.*

Radix e fibris numerosis, longiusculis, simplicibus, fuscescentibus.

Stipes unciam ad tres uncias longus, erectus, gracilis, fronde terminatus.

Frons bi-triuncialis, elliptica, membranacea, integerrima, apice obtusiuscula, inferne in stipitem sensim decurrens, reticulata, medio evidenter costata, costa versus apicem obsoletiore.

Pedunculus e basi frondis et ex apice stipitis, fronde duplo longior, erectus, teres.

Spica sub-biuncialis, lineari-compressa.

Capsulæ numerosæ, arcte connatæ.

Fig. 1. Capsula. f. 2. Semina:—*auct.*

This was discovered by our excellent friend C. S. Parker, Esq. of Liverpool, in one of the many herborizing excursions he made during his visit to Demerara. In the shape of the frond it comes nearest to the Cape *Ophioglossum nudicaule;* but that is much smaller in size, and has no appearance of midrib, which is very observable in our plant. It is probably allied to the New Holland *Oph. costatum* of Mr. Brown.

TAB. XL. (B.)

OPHIOGLOSSUM OPACUM.

Ophioglossum *opacum;* spica caulina, fronde cordata opaca spica longiore, venis inconspicuis, radice bulbosa.

Ophioglossum opacum. *Carmichael in Descr. of the Island of Tristan da Cunha, in Linn. Trans. v.* 12. *p.* 509.

Hab. In locis elevatis montis Insulæ Tristan da Cunha. *Carmichael.*

Ophioglosso reticulato valde affine: differt radice bulboso, fronde opaca, spica fronde breviore, et magnitudine quadruplo minore.

This may be called an alpine plant. Tristan da Cunha is situated in 37° 6′ South latitude; and the plant is said to grow "high up on the dome" of that island. This *dome,* Captain Carmichael tells us, in his very interesting account of that island, above quoted, is in itself 5000 feet high, and placed upon the top of a cone itself 3000 feet high. It is certainly very nearly allied to the *O. reticulatum;* and may perhaps prove a variety depending upon place of growth and other circumstances.

Polypodium crassinervatum

TAB. XLI.

POLYPODIUM OVATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. ***POLYPODIUM,*** Swartz. *Sori* subrotundi (seriati, sparsi v. conferti). *Involucrum* nullum. *Br.*

Polypodium *ovatum;* frondibus indivisis stipitatis membranaceis e basi decurrente ovatis acuminatis integerrimis costatis nervis parallelis, soris inter nervos simplici serie.

Polypodium ovatum. *Wall. MSS.*

Hab. In India Orientali. *Wallich.*

Radix e fibris numerosis, fuscis, ramosis, hic et illic ferrugineo-tomentosis.

Caudex teres, repens, nigro-fuscus, squamis membranaceis tectus.

Stipes digitalis ad palmarem, subflexuosus, rigidus, fusco-viridis, glaberrimus, inferne hispido-paleaceus.

Frons stipite subbrevior, e basi decurrente vel in stipitem attenuata, ovata, acuminata, omnino integerrima, membranacea, glabra, costata, venis lateralibus oblique patentibus parallelis, venulisque transversis has connectentibus instructa.

Sori simplici (rarissime duplici) serie dispositi, rotundati, nudi.

Capsulæ longe pedicellatæ, sphæricæ, annulo lato incompleto cinctæ.

Semina ovalia, subangulata, reticulata.

Fig. 1. Capsulæ. f. 2. Semina:—*magn. auct.*

We have no means of ascertaining in what part of India this curious and rare Fern was discovered. It approaches the character of *P. scolopendrium* of Hamilton in Don's *Flora Nepalensis;* and this may perhaps be a native of the same country.

2
D'Gravillon del.
4
Polypodium serratopenduinides
3
1

TAB. XLII.

POLYPODIUM SCOLOPENDRIOIDES.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. ***POLYPODIUM***, Swartz. *Sori* subrotundi (seriati, sparsi v. conferti). *Involucrum* nullum. *Br.*

Polypodium *scolopendrioides;* frondibus sublonge stipitatis subteneris lanceolatis sinuato-pinnatifidis, laciniis ovato-triangularibus obtusiusculis, basi apiceque attenuatis, soris sparsis biserialibus.

Polypodium scolopendrioides. *Linn. Sp. Pl. p.* 1544. *Swartz. Syn. Fil. p.* 33. *Willd. Sp. Pl. v.* 5. *p.* 181. *Spreng. Syst. Veget. v.* 4. *p.* 50.

Polypodium incisuris Asplenii. *Plum. Fil. t.* 91.

Filix Jamaicensis simpliciter pinnatis Asplenii foliis. *Pluken. Alm. t.* 290. *f.* 1.

Hab. In Insula Martinicæ. *Plumier.* Jamaica. *Plukenet. Swartz. D. Wiles.*

Radix e fibris nigris, ramosis, hic et illic tomentosis.

Caudex repens, squamis lanceolatis membranaceis fuscis dense obsitus.

Stipes digitalis et ultra, nigro-fuscus, nitidissimus, basi subpilosus.

Frons palmaris ad spithamæam sesquiunciam lata, lanceolata, costata, venisque obliquis ramosis, sinuato-pinnatifida, sinubus acutis, laciniis triangulari-ovatis, obtusiusculis, sub lente remote ciliatis, basi attenuata, apice acuminata, integerrima.

Sori parvi, subrotundi, venulis inserti, in duas lineas, venis primariis paralleli, dispositi.

Capsulæ longe pedicellatæ, fuscæ, globosæ, annulo elastico lato fere completo.

Semina minutissima, sphærica.

Fig. 1. Portio frondis hinc epidermide sublata, ut venæ internæ in conspectum veniunt. f. 2. Frondis segmentum contra lucem sub lente visum. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

The *Polypodium incisum* of Swartz, appears, as far as we can judge from the description, to be a species very nearly allied to this; and Linnæus is himself said to have confounded the two; the *P. scolopendrioides* of the first edition of *Sp. Pl.* being now considered as the *P. incisum*, and that of the last edition our true plant. Swartz tells us that the *P. scolopendrioides* has the smaller, but broader, fronds, and that the lower segments or divisions are remote from each other, so as to be there pinnate, as in Plukenet's figure. But the same author equally refers to Plumier's plant, which exactly, in this respect, resembles our own, having those segments coadunate.

In this Fern the cuticle or epidermis is easily removed by the aid of a dissecting knife; and then the nerves are rendered distinctly visible, with the dots or scars whence the sori have proceeded; as shown at fig. 1. of our plate.

We are indebted to A. B. Lambert, Esq. for our specimens, who received them from Mr. Wiles of Jamaica.

Gramnitis lanceolata

TAB. XLIII.

GRAMMITIS LANCEOLATA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *GRAMMITIS*, Sw. *Sori* oblongi, lineares, recti, sparsi. *Indusia* nulla. *Willd.*

Grammitis *lanceolata*; breviter stipitata, fronde simplici submembranacea costata subreticulata lanceolata acuta inferne attenuata, margine integerrima, soris costæ contiguis subparallelisque supremis confluentibus.

Grammitis lanceolata. *Swartz. Syn. Fil. p.* 22 *et* 212. *t.* 1. *f.* 4. *Willd. Sp. Pl. v.* 5. *p.* 139. *Spreng. Syst. Veg. v.* 4. *p.* 41. (not Schkuhr.)

Asplenium plantagineum β. *Lam. Dict. p.* 303. *Illustr. t.* 867. *f.* 1.

Hab. In Insula Mauritii et Borboniæ. *Commerson.* Repens, in sylvis umbrosis, ad arborum radices, et in locis siccis inter saxa in monte Pouce, insulæ Mauritii. *Bojer.*

Radix fibrosa, nigra, ramosa, dense ferrugineo-tomentosa.

Caudex longe repens, crassitie pennæ corvinæ, squamis nigrescentibus, ovatis longe acuminatis, reticulatis, serrulatis obsitus.

Stipes subnullus.

Frons spithamæa, ubique glabra, submembranacea, indistincte reticulata areolis oblongis, plana, margine integerrima, basi in stipitem perbrevem attenuata, apice acuta, vix acuminata, medio costata, costa vix prominula.

Sori in partem superiorem frondis plerumque dispositi, costæ contigui et ei paralleli aut rarius subobliqui, fere simplici serie, lineares, nunc duas ad tres lineas longi, nunc unciales, lineam lati, prominuli, basi apiceque obtusi, venulis inserti: supremis non raro confluentibus.

Capsulæ numerosæ, arctissime dispositæ, pallide fuscæ, annulo incompleto cinctæ.

Semina angulata, lævissime punctulata, opaca, albo-virescentia.

Fig. 1. Portio frondis, cum soro. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

We are indebted for our beautiful specimens of this little-known Fern to M. Bojer of the Mauritius, who took it for a *Tænitis*, and marked it *Tænitis simplicifolia* of his MSS. We think, however, that there is no doubt of its being the *Grammitis lanceolata* of Swartz: but it must be allowed that the fructification, especially in the upper part of the frond, has a good deal the appearance of that of a *Tænitis*.

Schkuhr (*t.* 7.) mistook a West Indian Fern (the *Grammitis elongata* of Sw. and Willd.) for this of the Mauritius; but that differs from our plant in its much smaller size, more rigid texture, in the presence of numerous stellated scales, and in the sori of fructification being short, uniform, and forming a regular series or single line between the margin and the midrib.

Xiphobolus bicolor

- Swan Sc -

TAB. XLIV.

NIPHOBOLUS BICOLOR.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *NIPHOBOLUS*, Kaulf. *Sori* subrotundi, congesti, terminales, pilis stellatis obtecti. *Involucrum* nullum.

Niphobolus *bicolor*; fronde lineari-lanceolata obtusa basi in stipitem attenuata, subtus stellulato-tomentosa incana, costa prominente, soris subdiscretis.

Niphobolus bicolor. *Kaulf. Enum. Fil. p.* 128. *Spreng. Syst. Veg. v.* 4. *p.* 44.

Polypodium stellatum. *Vahl. Symb.* 3. *p.* 104. *Swartz. Syn. Fil. p.* 25. *Willd. Sp. Pl. v.* 5. *p.* 151. *Schkuhr, Fil. t.* 8.

" Polypodium serpens. *Forster, Prodr. n.* 435."

Polypodium stoloniferum. *Gmel. Linn. v.* 2. *p.* 1305.

Hab. In Nova Zeelandia. *Forster.*

Caudex repens, flexuosus, pennæ corvinæ crassitie, squamis numerosis arcte appressis tectus, inferne hic et illic radiculosus.

Stipes duas ad tres uncias longus, pilis minutis radiatis obsitus.

Frons digitalis ad palmarem, coriacea, lineari-lanceolata, basi attenuata, apice obtusa, margine omnino integerrima, costata, costa subtus prominente, facie superna viridi pilis radiatis sparsa, subtus dense stellato- vel radiatim pilosa, albo-tomentosa. Hæ stellulæ e pilis pellucidis 6—10.

Sori in parte superiore frondis numerosi valde convexi fere hemisphærici, fusci, approximati, vel discreti.

Capsulæ longe pedicellatæ, ovato-sphæricæ, lato annulatæ, pilis radiatis longe stipitatis peltatis immixtæ.

Semina reniformia, subangulata, flavo-virescentia.

Fig. 1. Pili stellati e dorso frondis. f. 2. Pili stellati stipitati e soris. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

Whether or not the genus *Niphobolus*, (so called from the snow-like covering of down which invests several of the species,) be founded in nature, we do not at present pretend to determine. Perhaps it may be better to incorporate its species, as well as those of *Pleopeltis*, as had previously been done, with *Polypodium*. Indeed, with *Pleopeltis* our genus has much affinity; the stellated or radiated hairs in *Niphobolus* being exactly analogous to the little peltate *scales* of that genus.

Gymnogramma
chærophylla.

TAB. XLV.

GYMNOGRAMMA CHÆROPHYLLA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *GYMNOGRAMMA,* Desv. *Sori* oblongi, venis frondis simplicibus furcatisve inserti. *Indusium* nullum. *Frondes* pinnatæ bipinnatæ, decompositæve; *radices* cæspitosæ. *Desv.*

Gymnogramma *chærophylla;* fronde tenera decomposita nuda, pinnulis fertilibus oblongis, sterilibus flabelliformibus pinnatifidis inciso-lobatis, segmentis linearibus acutiusculis, rachi alata.

Gymnogramma chærophylla. *Desv. Journ. de Bot.* 1813. *p.* 26. *Spreng. Syst. Veg. v.* 4. *p.* 40.

Hemionitis chærophylla. *Poir. in Lam. Encycl. Suppl. v.* 3. *p.* 39.

"Hemionitis cicutaria. *Herb. Banks.*" (Menzies MSS.)

Hab. In Paraguay. *Desvaux.* Brasilia. *Commerson.* Jamaica. *Menzies.*—Cult. In Hort. Bot. apud Liverpool. *Shepherd.*

Radix cæspitosa, fibrosa, fibris nigris ramosis.

Stipites plurimi, ex eadem radice, digitales ad palmares, graciles, nitidi, subtetragoni, flavo-virescentes, basi nigro-fusci.

Frons, circumscriptione, ovata, vel deltoidea, tenera, acuminata, tri-quadripinnata, ubique glabra, nuda. *Pinnæ* primariæ remotæ, ovato-lanceolatæ, vel in partem superiorem anguste lanceolatæ, bipinnatæ, inferioribus tripinnatis, pinnulis pinnatifidis, inciso-lobatis, segmentis linearibus, acutis, rachibus ubique alatis. *Pinnulæ steriles* multoties latiores, fere flabelliformes. *Color* pallide viridis.

Sori oblongi, furcati, in omnibus pinnulis dispositi.

Capsulæ laxe dispositæ, sphæricæ, sessiles, pulcherrime reticulatæ: annulo incompleto.

Semina triangularia, pallide viridi-flava.

Fig. 1. Pinna cum soris. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

This delicate and very beautiful Fern has, in a great degree, the habit and general appearance of *Cryptogramma leptophylla;* but it is much larger, more divided, and the pinnules are of a different figure.

The specimens here figured were communicated in 1826 by the Messrs. Shepherds, from the Liverpool Botanic Garden, whence it was received from M. Otto of Berlin. Our friend Mr. Menzies has given us a specimen which he gathered in Jamaica, and which he has marked as the *Hemionitis cicutaria* of the Banksian Herbarium; a name certainly equally applicable with that already published by Poiret and Desvaux.

Professor Raddi has not included this in his *Filices Brasilienses.*

3

2.

1.

Antrophyum fraxinifolium.

TAB. XLVI.

ANTROPHYUM PUMILUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ANTROPHYUM*, Kaulf. *Sori* lineares, continui, venis frondis reticulatis immersi. *Indusium* geminatum, medio dehiscens. *Kaulf.*

Antrophyum *pumilum;* frondibus lanceolatis obtusiusculis basi in stipitem brevem attenuatis, soris longissimis lineari-filiformibus subreticulatim connexis immersis.

Antrophyum pumilum. *Kaulf. Enum. Fil. p.* 197. *Spreng. Syst. Veget. v.* 4. *p.* 67. (excl. syn. *P. coriaceæ*, Don.)

Hemionitis immersa. *Bory MSS. Willd. Sp. Pl. v.* 5. *p.* 127.

Hab. In rupibus Borboniæ. *Bory.* Insula Mauritii. *D. Carmichael.*

Radix fibrosa, densissime tomentosa, ramosa.

Stipes brevis, vix unciam longus, compressus.

Frondes subcæspitosæ, digitales et ultra, fere coriaceæ, ecostatæ, siccitate subrugosæ, nervis obsoletis, margine integerrimo, basi in stipitem attenuatæ, apice obtusiusculæ.

Sori lineari-filiformes, longissimi, reticulatim ramosi, frondis substantia immersi.

Involucrum duplex e marginibus sulcorum fructificationis ortum.

Capsulæ numerosissimæ, sphæricæ, reticulatæ, pedicellatæ, annulatæ.

Semina subsphærica, pallide flava.

Fig. 1. Portio frondis cum soris. f. 2. Portio frondis, cum soro, transversim secta. f. 3. Semina.

The genus *Antrophyum*, established by Kaulfuss in his valuable *Enumeratio Filicum*, is well distinguished from *Hemionitis* by the presence of an involucre, always, we believe, following the lines of the veins, although in some species the veins themselves are scarcely visible when not rendered so by the presence of the fructification.

The present plant, for specimens of which, from the Isle of France, we are indebted both to Captain Carmichael and to A. B. Lambert, Esq., is remarkable in having the lines of fructification immersed in the very substance of the frond.

Our specimens vary in size, but they are all larger than those described by Willdenow.

Schizaea rupestris

— *D.r Greville del.* —

TAB. XLVIII.

SCHIZÆA PUSILLA.

FILICES.—Osmundaceæ. *Br., Kaulf.* Schismatopterides. *Willd.* Gleicheniæ. *Spreng.*

Gen. Char. *SCHIZÆA*, Sm. *Capsulæ* ovales, sessiles, apice radiatim striato, basi insertæ, in appendice divisa terminali frondis dorsales. *Indusium* e marginibus inflexis appendicis continuum, intus liberum. *Br.*

Schizæa *pusilla;* frondibus indivisis lineari-filiformibus sterilibus multo brevioribus siccitate tortuosis integerrimis, appendice pinnata subquinquejuga, laciniis oblongo-linearibus ciliatis.

Schizæa pusilla. *Pursh, Fl. N. Am. v. 2. p. 657. Nutt. Gen. of N. Am. Pl. v. 2. p. 249. Eaton, Manual of Botany, p. 446. Spreng. Syst. Veg. v. 4. p. 30.*

Hab. Paludosis, inter sphagna, Americæ Septentrionalis, rarissime: in uno loco hucusque, ut videtur, lecta, Quaker-Bridge dicto, provincia Novæ Cæsareæ. *Eddy* (fide Nuttallii).

Radix fibrosa, fibris simplicibus fuscis sublonge inter muscos descendentibus.

Caudex omnino nullus.

Frondes cæspitosæ, subbiformes, lineari-filiformes, glabræ, integerrimæ; *steriles* vix duas uncias longæ, basi attenuatæ, sursum latiores, falcato-curvatæ, rigidiusculæ, siccitate tortuosæ, glauco-virides, vix costatæ; *fertiles* duplo triplove longiores, digitales, erectæ, basi apiceque attenuatæ.

Appendix fructificans vix semiunciam longa, pinnata, pinnis per paria dispositis subquinquejugis, secundis, oblongo-linearibus, dorso convexis, medio costatis, costa hinc prominente, marginibus seu involucris ciliatis.

Capsulæ in duas lineas dispositæ, majusculæ, ovatæ, hinc gibbosæ, reticulatæ, apice radiatim striato.

Semina reniformi-cylindracea, opaca, obscure pallide viridia.

Fig. 1. Planta:—*magn. nat.* in sphagna proveniens. f. 2. Eadem:—*magn. auct.* f. 3. Pinna appendicis fructificantis. f. 4. Capsula. f. 5. Semina:—*magn. auct.*

Mr. Pursh seems to consider that the minuteness of this plant may have caused it in many cases to be passed by unobserved: but hitherto we believe no one has detected it except in the spot where it was originally discovered, as we learn from Mr. Nuttall, by Dr. Eddy of New York.

Our specimens were gathered by Dr. Torrey, who informs us that the spot (Quaker-Bridge, in Burlington County, New Jersey) is thirty-one miles N.W. from Philadelphia:—so that it grows further from the tropics than any species of the genus we are yet acquainted with.

1

4

3

5

2

Pellizoa pusilla.

—J. Grenvillea del. —

— Swan Sc —

TAB. XLVIII.

SCHIZÆA RUPESTRIS.

FILICES.—Osmundaceæ. *Br.*, *Kaulf.* Schismatopterides. *Willd.*
Gleicheniæ. *Spreng.*

Gen. Char. *SCHIZÆA*, Sm. *Capsulæ* ovales, sessiles, apice radiatim striato, basi insertæ, in appendice divisa terminali frondis dorsales. *Indusium* e marginibus inflexis appendicis continuum, intus liberum. *Br.*

Schizæa *rupestris*; frondibus indivisis planis linearibus margine integerrimis, appendice pinnata 5—8-juga, involucris incisis. *Br.*

Schizæa rupestris. *Br. Prodr. Fl. Nov. Holl. v.* 1. *p.* 162. *Spreng. Syst. Veg. v.* 4. *p.* 30.

Hab. In Nova Hollandia; apud Port Jackson. *Brown.* In saxis udis Montibus Cæruleis (*Blue Mountains*) rarissime. *Fraser.*

Radix e fibris plurimis, rigidis, plerumque simplicibus constans.

Caudex repens, squamosus, squamis nitidissimis, fuscis, subulatis.

Frondes ex eodem puncto caudicis plurimæ, subcæspitosæ, simplices, lineares, compressæ, costatæ, integerrimæ, omnino glabræ, flexuosæ, basi insigniter attenuatæ; *steriles* digitales, sursum latiores apice acuto; *fertiles* paululum longiores, angustiores versus apicem attenuatæ.

Appendices fructificantes terminales, pallide fuscæ, subunciam longæ, pinnatæ, pinnis per pariam approximatis 6—8- vel 9-jugis, magis minusve secundis, linearibus, nervosis, marginibus (seu involucris) incisis.

Capsulæ duplici serie dispositæ, pilis nullis, ovatæ, subgibbosæ, reticulatæ, vertice radiatim striato.

Semina opaca, pallide viridia, oblonga, subreniformia.

Fig. 1. Portio frondis, cum appendice fructifera. f. 2. Pinna seu lacinia appendicis, cum capsulis. f. 3. Capsula. f. 4. Semina:—*magn. auct.*

Four species of the curious and beautiful genus *Schizæa* are enumerated in the *Prodr. Fl. Nov. Holl.* of Mr. Brown. The present individual was first discovered by that eminent botanist, and seems to be only known to inhabit the vicinity of Port Jackson and the Blue Mountains.

Lycopodium subulifolium

—Dr. Greville del.—

TAB. XLIX.

LYCOPODIUM SUBULIFOLIUM.

LYCOPODINEÆ. *Swartz., Br., Kaulf.* STACHYOPTERIDES. *Willd.*

GEN. CHAR. *LYCOPODIUM,* Linn. *Capsulæ* uniloculares, axillares, sessiles; *aliæ* bivalves, farina repletæ; *aliæ* 2—3-valves, corpusculis 1—6, globosis. *Br.*

LYCOPODIUM *subulifolium;* caule dichotomo, foliis erectis imbricatis subulatis rigidis integerrimis vix nervosis, capsulis in parte superiore caulis axillaribus.

HAB. E Nepalia communicavit *Cel. Wallich,* anno 1818 lectum.

Radix densissime cæspitosa, fibrosa.

Caulis (pendens?) pedalis, dichotome divisus, ramis fructiferis elongatis flexuosis.

Folia undique inserta, sparsa, erecta, imbricata, nitida, viridia, rigida, exacte subulata, paululum curvata, siccitate etiam, medio vix nervosa, margine omnino integerrima.

Capsulæ numerosissimæ, in partem superiorem caulis, majusculæ, axillares, sessiles, solitariæ ad basin cujusque folii, flavæ, reniformes, basi profunde emarginatæ, bivalves. *Granulæ* vel *Semina* quaternatim conjuncta, demum libera, subangulata, flava.

Fig. 1. Folium. f. 2. 3. Folia cum capsulis. f. 4. Semina:—*magn. auct.*

We have already stated under *L. pulcherrimum* how the present is to be distinguished from that species. We may here add that this is a much larger plant, and that the capsules have a much deeper sinus beneath.

— Dr Greville del. —

Lycopodium gnidioides.

LYCOPODIUM GNIDIOIDES.

LYCOPODINEÆ. *Swartz., Br., Kaulf.* STACHYOPTERIDES. *Willd.*

GEN. CHAR. *LYCOPODIUM,* Linn. *Capsulæ* uniloculares, axillares, sessiles; *aliæ* bivalves, farina repletæ; *aliæ* 2—3-valves, corpusculis 1—6, globosis. *Br.*

LYCOPODIUM *gnidioides;* caule dichotome ramoso foliis subsexfariam imbricatis lineari-oblongis canaliculatis acutis, nervo ad apicem excurrente, capsulis in axillis foliorum acutiorum terminalium.

Lycopodium gnidioides. *Linn. Suppl. p.* 148. *Swartz. Syn. Fil. p.* 174. *Willd. Sp. Pl. v.* 5. *p.* 47. *Spreng. Syst. Veg. v.* 4. *p.* 20. *Smith in Rees Cycl.*

Lycopodium funiculosum. *Lam. Encycl. v.* 3. *p.* 649.

" Lycopodium flagelliforme. *Schrad.*" (*fide Spreng.*)

Lycopodium pinifolium. *Kaulf. Enum. Fil. p.* 7.

HAB. In Insula Mauritii. *Commerson?* In Capite Bonæ Spei. (*Willd.*) *Villet.*

Radix densissime cæspitosa, fibrosa, fibris ramosis valde intricatis.

Caulis spithamæus, fere ad pedalem, flexuosus, repetitim dichotomus, ubique foliosus.

Folia subsexfariam disposita, erecta, imbricata, semiunciam longa, vix lineam lata, lineari-oblonga, nitida, canaliculata integerrima acutiuscula, nervo obscuro intus elevato, dorso depresso, ad apicem attingente instructa:—*suprema* (capsulifera) breviora, latiora, acutiora, spicam referentia.

Capsulæ in axillis foliorum supremorum sessiles, reniformes; bivalves, flavæ, granulis sphæricis repletæ. Hæ *granulæ* vel *sporulæ* nunc videntur ternatim compositæ.

Fig. 1. Folium. f. 2. Folium cum capsula. f. 3. Sporulæ:—*magn. auct.*

It is difficult to say whether this *Lycopodium* should be arranged among those species which have a spicate fructification, or those whose capsules are simply placed in the axils of the leaves. The uppermost leaves, which mostly contain the capsules, are shorter and broader than the rest, and collectively form a terminal sessile *spike;* but by no means so distinct as in many species of the genus. Some authors have considered the fructification to be spicate, and others axillary; and hence botanists have differed about the species, which in reality is, in other respects, a very distinctly marked one, and very aptly named, from its resemblance to some individuals of the genus *Gnidia* or to *Daphne gnidioides.*

Our specimens were communicated from the Cape of Good Hope by M. Villet, who has sent us many excellent plants from that rich botanical country.

Vanda Medosa.

DANÆA ELLIPTICA.

FILICES.—Marattieæ. *Bory.* Marattiaceæ. *Kaulf.* Poropterides. *Willd.*

Gen. Char. *DANÆA,* Sm. *Sori* lineares, dorsales, transversi, paralleli. *Capsulæ* in series geminatas arcte connatæ, superne poro dehiscentes. *Indusium* superficiarium soros cingens. (Asplenii Sp. *Linn.*)

Danæa *elliptica;* fronde pinnata, rachi nodosa vix alata, pinnis breviter petiolatis elliptico-oblongis acuminatis subintegerrimis basi oblique acutis, fertilibus oblongo-lanceolatis.

Danæa elliptica. *Smith in Rees' Cycl.*

Filix major, &c. *Sloane's Jamaica, t.* 41. *f.* 1.

Hab. India Occidentali. Jamaica. *Sloane. Smith.* Insula Sancti Vincentii. *Rev. L. Guilding.*

Stipes vix pedalis, dorso convexus, facie superna canaliculatus, infra frondem nodosus, pubescens, demum glaber. *Frondes* pedales et ultra, erectæ, circumscriptione ovatæ, pinnatæ, pinnis inferioribus exacte oppositis, superioribus nunc subalternis: *plantæ sterilis* semipedalibus, duas uncias latis, elliptico-oblongis, acuminatis, subundulato-crenatis, sed vix serratis, basi inæqualiter acutis, in petiolum brevem attenuatis, glabris, opacis, luride viridibus, subtus pallidioribus, costatis, costa subtus hic et illic fasciculato-pubescentibus, parallelo-venosis, venis numerosis transversalibus basi furcatis. *Rachis* ad insertionem pinnarum nodosa. *Plantæ fertilis, pinnæ* oblongo-lanceolatæ, sterilibus minores, basi apiceque acutæ.

Fructificatio omnino ut in *D. alata* (Tab. XVIII.).

Fig. 1. Sorus. f. 2. Semina:—*magn. auct.*

Our friend Mr. Guilding, who seems to live surrounded by the noblest of the tropical Ferns, marked this fine species of *Danæa* as distinct both from *D. alata* and *D. nodosa.* With the latter, indeed, there is no danger of its being confounded; and Sir James Smith, who certainly appears to have had the same plant in view, in describing his *D. elliptica,* well observes, that the greater breadth of the pinnæ and their being acute, not cordate, at the base, will afford the distinguishing characters. This greater proportionate breadth exists in the fertile as well as the barren pinnæ, and even in the fronds, so as to give a character to the plant at first view. Sloane's figure is very characteristic for the barren frond.

Danea elliptica.

DANÆA NODOSA.

FILICES.—Marattieæ. *Bory.* Marattiaceæ. *Kaulf.* Poropterides. *Willd.*

Gen. Char. *DANÆA,* Sm. *Sori* lineares, dorsales, transversi, paralleli. *Capsulæ* in series geminatas arcte connatæ, superne poro dehiscentes. *Indusium* superficiarium soros cingens. (Asplenii Sp. *Linn.*)

Danæa *nodosa;* fronde pinnata, rachi nuda nodosa, pinnis breviter petiolatis lineari-ellipticis apice acuminatis subintegerrimis basi acutis, fertilibus lineari-lanceolatis.

Danæa nodosa. *Smith, Tracts. p.* 260. *Swartz. Syn. Fil. p.* 167. *Willd. Sp. Pl. v.* 5. *p.* 68. (excl. syn. Sloanii.) *Spreng. Syst. Veget. v.* 4. *p.* 24.

Asplenium nodosum. *Linn. Sp. Pl. p.* 1539.

Asplenium simplex assurgens, foliis longis oppositis, caule geniculato, lineis fructificationum serie contigua. *Browne Jam. p.* 93.

Lingua cervina nodosa major. *Plum. Fil. p.* 90. *t.* 108.

Hab. In locis umbrosis humidis Jamaicæ, Hispaniolæ, Martinicæ, et ad Caraccas. (*Willd.*)
In Insula Sancti Vincentii. *Rev. L. Guilding.*

Stipes bipedalis et ultra, 4—6 lineas latus, erectus, dorso convexo, facie superna canaliculata, squamulis minutis fuscis hic et illic tectus.

Frons bi-tripedalis, circumscriptione oblonga, pinnata, rachi ad insertionem pinnarum nodosa, dorso convexa, facie superna plana, marginata.

Pinnæ numerosæ, 15-pares cum impari, oppositæ, 8-pollicares, patentes, lineari-ellipticæ, supra medium parum latiores, apice acuminatæ, subintegerrimæ, basi acutæ, in petiolum brevem attenuatæ: *Substantia* rigida, subcoriacea: *Costa* subtus squamulosa: *Nervæ* parallelæ, transversales, numerosissimæ, ad basin sæpe furcatæ. *Color* pallide viridis, nitidus. *Pinnæ* fertiles, sterilibus minores, lineari-lanceolatæ, basi acutæ, apice subacuminatæ.

Fructificatio ut in *D. elliptica* et *D. alata* jamdudum descriptæ.

Fig. 1. Apex frondis sterilis. f. 2. Apex frondis fertilis. f. 3. Pinna cum rachi inferiore frondis sterilis. f. 4. Pinna inferior frondis fertilis. f. 5. Sorus. f. 6. Semina:—*magn. auct.*

Willdenow was only acquainted with the fructified state of the frond: but it is in the sterile fronds that the most striking differences are found to exist between this species and *D. alata* and *D. elliptica.* Some of the fronds which Mr. Guilding has sent us, including the stipes, measure not less than six feet in height, and almost a foot and a half in diameter in the widest part. The pinnæ are remarkable for their pale colour, their shining surface, and rigid texture. In drying, the knots at the insertion of the leaves, probably, in a certain degree, disappear, for they are by no means so visible in our specimens as in Plumier's figure.

Grammitis involuta

GRAMMITIS INVOLUTA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *GRAMMITIS*, Sw. *Sori* oblongi, lineares, recti, sparsi. *Indusia* nulla. *Willd.*

Grammitis *involuta*; breviter stipitata, fronde simplici lanceolata coriacea basi apiceque valde attenuata margine integerrima (siccitate involuta), soris obliquis prominentibus, capsulis pilis articulatis immixtis.

Grammitis involuta. *Don Prodr. Fl. Nepal. p.* 14. *Spreng. Syst. Veget. v.* 4. *p.* 41.

"Scolopendrium revolutum. *Hamilton MSS.*"

Grammitis? plantaginea. *Wallich MSS. in Herb. nostr.*

Grammitis flavescens. *Wallich MSS. in Herb. nostr.*

Hab. In Nepalia. *Hamilton. Wallich.*

Radix fibrosa, fibris ramosis, nigris, tomento ferrugineo dense obsitis.

Caudex, ut videtur, repens, crassus, squamis majusculis, imbricatis, ovatis, acuminatis, reticulatis, integerrimis tectus.

Stipes vix unciam longus, hinc sulcatus, dorso convexus, duas lineas latus, nudus.

Frons omnino glabra, subpedalis, lanceolata, valde acuminata, inferne in stipitem sensim attenuata, coriacea, costata, costa subtus prominente, enervis, margine tenui integerrimo, siccitate involuto.

Sori numerosi, unciam ad duas aut tres uncias longi, obliqui, paralleli, insigniter prominentes, fere semicylindrici, utrinque obtusi.

Capsulæ pedicellatæ, exacte sphæricæ, flavescentes, annulo lato, fusco, fere integro cinctæ. Inter has capsulas *pili* numerosi, articulati, pellucidi, iis longiores.

Semina oblonga, subangulata, pellucida.

Fig. 1. Capsulæ. f. 2. Semina. f. 3. Pili e soris:—*magn. auct.*

We cannot say whether in a living state the margin of this Fern is involute: to us it appears to be the effect of drying, as we know to be equally the case in the *Polypodium pertusum*. There is too, on the surface of the present plant, as seen in the herbarium, a rugose or wrinkled appearance, the consequence of the drying and shrinking of the parenchymatous substance beneath the epidermis.

Our plants were gathered by Dr. Wallich in Nepal, and were sent to us with the name of *Grammitis? plantaginea*; whilst Dr. Hamilton seems previously to have given the MSS. specific name of *involutum*, which is adopted by Mr. Don. Again, we have received specimens from the Honourable the East India Company, bearing the name "*Grammitis flavescens*. Wall."

Schizæa trilateralis

SCHIZÆA TRILATERALIS.

FILICES.—Osmundaceæ. *Br.*, *Kaulf.* Schismatopterides. *Willd.*
Gleicheniæ. *Spreng.*

Gen. Char. *SCHIZÆA*, Sm. *Capsulæ* ovales, sessiles, apice radiatim striato, basi insertæ, in appendice divisa terminali frondis dorsales. *Indusium* e marginibus inflexis appendicis continuum, intus liberum. *Br.*

Schizæa *trilateralis;* frondibus simplicissimis lineari-triquetris, appendicibus (6—10) linearibus digitatis falcato-secundis intus crinitis.

Schizæa trilateralis. *Schkuhr Fil. p.* 137. *t.* 136. *Spreng. Syst. Veget. v.* 4. *p.* 30.

Schizæa incurvata. *Meyer Fl. Esseq. p.* 291. (excl. syn. Schkuhrii.)

Hab. Locis udis Americæ Meridionalis; Essequebo. *Schkuhr. Meyer.* Demerara. *Parker.*

Radix e fibris plurimis, subsimplicibus, ferrugineo-pilosis.

Caudex, ut videtur, repens, squamis fuscis, subulatis, nitidissimis dense obsitus.

Frondes plurimæ ex eadem caudice, cæspitosæ, erectæ, pedales et ultra, basi teretes, fuscæ, scabriusculæ, superne compresso-triquetræ, angulis acutis, viridi-fuscæ, glaberrimæ, lineam latæ, versus apicem attenuatæ.

Appendices fructificantes terminales, fasciculato-digitatæ, per pariam approximatæ, sesquiunciales ad biunciales, sex ad decem, lineares, primum virides, demum ferrugineo-fuscescentes, falcato-secundæ, acutæ, costatæ, dorso convexæ, vel semiteretes, intus canaliculatæ, capsuliferæ, atque medio (margineque rarissime) paleis linearibus clavatis, flexuosis, intense fulvis, capsulis longioribus, crinitæ.

Capsulæ in series quatuor dispositæ, parvæ, intense fuscæ, laxe reticulatæ, vertice striatæ, longitudinaliter dehiscentes.

Semina minutissima, oblonga, alba.

Fig. 1. Portio frondis cum appendicibus fructificantibus, ex sicco. f. 2. Portio appendicis, cum capsulis paleisque. f. 3. Capsulæ. f. 4. Semina. f. 5. Setæ vel paleæ:—*magn. auct.*

We are indebted for the superb specimens of this truly elegant Fern to our excellent friend C. S. Parker, Esq. of Liverpool, who gathered them in Demerara in 1824. The same plant had been previously found in the neighbouring district of the Essequebo in Dutch Guiana, and we believe no where else.

It certainly bears a very close affinity with the *Schizæa digitata* of the East Indies (the *Schizæa marginata* of *Wall. MSS.*): but that has broader, more compressed, almost winged fronds, and the capsules are not intermixed with the curious chaffy hairs which are so conspicuous in this species.

Lygodium dichotomum

LYGODIUM DICHOTOMUM.

FILICES.—Osmundaceæ. *Br., Kaulf.* Schismatopterides. *Willd.*
Gleicheniæ. *Spreng.*

Gen. Char. *LYGODIUM*, Sw. *HYDROGLOSSUM*, Willd. *Capsulæ* sessiles, ovatæ, medio insertæ, apice radiatim striato: in spiculis (simplicibus e margine pinnæ, v. dichotomis in fronde mutata), dorsales, biseriatæ. *Involucrum: Squamæ* capsulas distinguentes, e venis spiculæ ortæ, supra liberæ.

Stipes *volubilis*. Frondes *conjugatæ, divisæ* v. *compositæ*. Br.

Lygodium *dichotomum*; frondibus conjugatis dichotomis foliolis bi-tripartitis, laciniis sterilibus lanceolatis, fertilibus linearibus attenuatis, omnibus acutissimis integerrimis.

Lygodium dichotomum. *Swartz. Syn. Fil. p.* 154. *Spreng. Syst. Veget. v.* 4. *p.* 29.

Hydroglossum dichotomum. *Willd. Sp. Pl. v.* 5. *p.* 82.

Ugena dichotoma. "*Cav. Ic. v.* 6. *p.* 74. *t.* 594. *f.* 2."

Hab. In Insulis Marianis et Philippinis. *Cav. Swartz.* In Insula Pulo Penang, seu "Prince of Wales's Island," dicta. (*D. Sabine.*)

Stipes longissimus, volubilis, teres, flavo-fuscus, subnitidus, glaber, tactu scabriusculus.

Frondes glabræ, geminatæ seu basi conjugatæ, petiolatæ. *Petiolus* duas ad tres uncias longus, basi incrassatus, superne subalatus, dichotomus, et, ita, bi-foliolatus, *foliolis* profunde bi-tripartitis, basi in petiolum brevem, subalatum attenuatis, lobis *sterilium* duas ad tres uncias longis, lineari-lanceolatis, acutissimis, etiam subapiculatis, apiculo hirsuto, fertilium duplo triplove longioribus, linearibus, valde attenuatis, omnibus integerrimis, costatis, furcato-parallelo-venosis, subnitidis.

Spicæ numerosæ, parvæ, ad marginem loborum, venas terminantes, e squamis subdecem subtus imbricatis, facie superiore coadunatis, valde concavis, singula capsulam unicam includente.

Capsulæ ovatæ, pulcherrime reticulatæ, vertice radiatim striatæ.

Semina parva, triangularia, pellucida.

Fig. 1. Spica, a dorso visa. f. 2. Spica junior subtus visa. f. 3. Eadem magis matura. f. 4. Capsula (læsione, ut videtur, rupta). f. 5. Capsula integra:—*magn. auct.*

We regret that our not being able to have access to *Cavanilles's Icones* prevents us from determining, by his figure, what we can now only conjecture from his descriptive character; namely, that this is the *Ugena dichotoma* of that author. It is said by Willdenow to be similar to the *Ugena macrostachya* of the same writer (*Lygodium longifolium* of Swartz); and our plant, we must confess, also comes very near to the *L. circinatum* of Authors, figured in *Rumph. Amb. t.* 33. Indeed, were the pairs of barren leaflets in our figure united by the membranaceous portion at their base (which is *almost* the case in some of our specimens), we should then have a plant perfectly corresponding with the figure of Rumphius, in which the fertile leaflets are actually compound. May not the three species therefore which we have just mentioned, be considered as mere varieties of each other? They are all inhabitants of the islands of the Indian Ocean; and, on account of their beauty, are employed by the natives of Amboyna for adorning the entrances of their houses on marriage festivals, whilst the larger stems are made into cordage for the purpose of binding different utensils.

1

2

Polypodium Scouleri

Dr Greville. delt

TAB. LVI.

POLYPODIUM SCOULERI.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *POLYPODIUM,* Swartz. *Sori* subrotundi (seriati, sparsi, v. conferti). *Involucrum* nullum. *Br.*

Polypodium *Scouleri;* fronde coriacea profunde pinnatifida, lobis subquinis oblongis obtusissimis obscure crenatis basi sublobulatis, terminali majore sorifera, soris approximatis biserialibus.

Hab. Prope flumen Columbiam, in plaga occidentali Americæ Septentrionalis. *D. Scouler.*

Caudex repens, squamoso-setaceus, squamis subulatis, fuscis.

Stipes uncialis, erectus, nudus, dorso semicylindraceo, superne canaliculatus.

Frons, circumscriptione late ovata, profunde pinnatifida, coriacea, lobis plerumque quinque oblongis, obtusissimis, obscure crenatis, costatis, subnervosis, glaberrimis, basi sublobulatis, lateralibus sesquiuncialibus, terminali majori, biunciali et ultra, sorifero.

Rachis fusca, glabra.

Sori in duas lineas arcte dispositi, fusci, rotundati, prope costam vel rachin inserti.

Capsulæ subrotundæ, fuscæ, longissime stipitatæ, stipite articulato.

Semina oblonga, vel subreniformia, sub summa lente reticulata, flava.

Fig. 1. Capsulæ cum stipitibus. f. 2. Semina:—*magn. auct.*

Among the interesting collection of plants which Dr. Scouler has recently brought from the North-West coast of America is the present very distinct species of Fern. It may perhaps rank next to *Polypodium vulgare,* but is distinguished from that, as from every other of the same division, by the small number of lobes, their relative breadth and length, their bluntness, and the large terminal one with its distinct and prominent spots of fructification.

Lycopodium Wildenowii

TAB. LVII.

LYCOPODIUM WILLDENOVII.

LYCOPODINEÆ. *Swartz., Br., Kaulf.* STACHYOPTERIDES. *Willd.*

GEN. CHAR. *LYCOPODIUM,* Linn. *Capsulæ* uniloculares, axillares, sessiles; *aliæ* bivalves, farina repletæ; *aliæ* 2—3-valves, corpusculis 1—6, globosis. *Br.*

LYCOPODIUM *Willdenovii;* foliis bifariis horizontalibus oblongis subfalcatis costatis integerrimis, stipulis multoties minoribus subconformibus, spicis terminalibus elongatis, squamis lato-cordatis integerrimis uninervibus.

Lycopodium Willdenovii. "*Desvaux.*"

Lycopodium lævigatum. *Willd. Sp. Pl. v.* 4. *p.* 45.

HAB. In India Orientali. *Willd.* Ex insula "Prince of Wales's Island" dicta, communicavit *D. Sabine.*

Caulis "scandens," filiformis, gracilis, sulcatus, subpaucifolius; *rami* distichi remoti bipinnatim divisi, ramulis subarcte insertis, foliosis.

Folia bifaria, disticha, horizontalia, plana, oblonga, subfalcata, obtusa, integerrima, costa medio percurrente fere ad apicem attingente.

Stipulæ cum foliis alternantes et iis subconformes, sed quintuplo minores, erectæ, appressæ.

Spicæ ad apices ramulorum, solitariæ, vix unciam longæ, filiformes, flavæ. *Squamæ* quadrifariam imbricatæ, erecto-patentes, late ovato-cordatæ, acutæ, integerrimæ, concavæ.

Capsulæ axillares, solitariæ, majusculæ, reniformes, bivalves, granulis vel seminibus minutis, sphæricis, marginatis repletæ.

Fig. 1. Caulis portio, cum folio stipulisque. f. 2. Apex ramuli spica terminatus. f. 3. Squama spicæ a dorso visa. f. 4. Squama intus visa, cum capsula. f. 5. Granulæ vel Semina:—*magn. auct.*

We have no authentic specimen of Willdenow's *L. lævigatum;* but that author's description so well accords with this plant, that we have no hesitation in considering it to be that species. Lamarck had, however, previously given the name of *lævigatum* to a very different *Lycopodium;* and hence Desvaux has changed the name to *L. Willdenovii.* In habit it is nearly allied to the *Stachygynandrum scandens,* figured by Palisot de Beauvois in his *Fl. d' Oware et de Benin;* but that plant has serrated leaves, whereas here both the leaves and stipules are quite entire.

1.

2.

3

4.

5.

Gleichenia alpina

Greville del.

Swan Sc

TAB. LVIII.

GLEICHENIA ALPINA.

FILICES.—Gleichenia. *Br.*, *Kaulf.* Schismatopterides. *Willd.*

Gen. Char. *GLEICHENIA.* *Capsulæ* annulo completo striato subsessiles, in soris rotundatis dorsalibus sæpius definitæ. *Indusium* nullum. *Frondes* dichotomæ vel furcatæ.

Gleichenia *alpina;* frondibus dichotomis proliferis, ramis pinnatis, pinnis pinnatifidis, lobis orbiculatis subtus fornicatis; adultis denudatis, rachi communi tomentosa, partialibus squamosis. *Br.*

Gleichenia alpina. *Br. Prod. p.* 161. *Spreng. Syst. Veget. v.* 4. *p.* 26.

Hab. In Insula Van Diemen (*D. R. Brown*); ubi in cacumine montis, "Wellington" dictæ, legit *D. Fraser.*

Stipes erectus, semicylindricus, flexuosus, 5- vel 6-pollicaris, inferne nudus, superne magis minusve tomentosus.

Frondes cæspitosæ, circumscriptione subdeltoideæ, primum, ut videtur, dichotomæ, demum innovationibus e centro dichotomiarum ortis ramis pinnatis compositæ. Hi *rami* iterum pinnati, pinnis pinnatifidis, linearibus, viridibus, glabris, nitidis; *lobis* orbiculatis, approximatis, subtus insigniter fornicatis. *Rachis* communis tomentosa, subsquamosa, partialibus ramisque novellis insigniter paleaceo-squamosis, squamis subpeltatis pulcherrime reticulatis fimbriatisque, fuscis.

Capsulæ plerumque binæ, in singulo lobo, pilis articulatis immixtæ, orbiculari-hemisphæricæ, oblique annulatæ, annulo dilatato completo.

Fig. 1. Pinna a dorso visa. f. 2. Pinna subtus visa. f. 3. Portio pinnæ fructiferæ. f. 4. Sectio transversalis lobi et rachis. f. 5. Capsula pilis immersa. f. 6. Squamula:—*magn. auct.*

The dichotomous ramification of this plant is scarcely observable, except in the young shoots; for it is remarkably proliferous; and, the young shoots originating from the centre of the dichotomies, the old branches then become pinnated in an opposite manner. In a young state too, we may observe, the whole plant is covered with a dense tomentum as well as with brown scales; but in age both disappear, except on the under side of the rachis of the ultimate pinnæ. So closely are the lobes of the pinnæ placed, and so remarkably convex on the upper side, that each pinna seems to be formed by two beaded lines. The deep concavity of the under surface is scarcely less remarkable, and can only be accurately seen when the scales of the rachis are removed; and if a transverse section be made through the rachis and lobes, the appearance is as if the lobes were jointed upon that rachis: indeed the whole structure of the plant is highly curious, and quite different from that of any Fern we are acquainted with. The substance of the fronds is remarkably thick, rigid, and coriaceous; and these are said by Mr. Fraser (to whom we are indebted for our specimens) to form large masses or beds on the summit of Mount Wellington.

TAB. LIX.

Aspidium rhizophyllum

ASPIDIUM RHIZOPHYLLUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ASPIDIUM*, Br. *HYPOPELTIS*, Mich. *ASPIDII species*, Sw., Willd. *Sori* rotundi dorsales. *Involucrum* orbiculare, peltatum, stipitatum, in medio sori insertum, undique liberum. *Br.*

Aspidium *rhizophyllum*; frondibus pinnatis hirsutis decumbentibus, pinnis subovalibus terminali longissime caudata radicante.

Aspidium rhizophyllum. *Sw. Syn. Fil. p.* 44. *Willd. Sp. Pl. v.* 2. *p.* 219. *Spreng. Syst. Veget. v.* 4. *p.* 100.

Polypodium rhizophyllum. *Sw. Prod. p.* 132. *Sw. Fil. Ind. Occ. p.* 1657.

Hab. In umbrosis montosis Jamaicæ australis.

Radix fibrosa, fibris tenuibus, ramosis, fuscis, subtomentosis.

Frondes subcæspitosæ, digitales et ultra, lanceolato-acuminatæ, pinnatæ, pilis brevibus fuscis undique obsitæ.

Stipes brevis, vix duas uncias longus, gracilis, fuscus, nitidus, paleaceo-squamosus; *rachis* gracilis, hirta.

Pinnæ subopposítæ, semiunciam longæ, parum remotæ, oblongæ, obtusæ, subintegerrimæ, basi oblique cuneatæ, terminali longissima, basi pinnatifida, lobis obtusis apice caudato—radicante, prolifera.

Sori sparsi in pinnam terminalem, in serie longitudinali prope costam inserti, rotundati.

Involucrum orbiculare, peltatum, umbilicatum.

Capsulæ numerosissimæ, in singulo soro pedicellatæ, fuscæ, annulo latiusculo fere completo cinctæ.

Semina fusca, margine tuberculato, pellucido.

Fig. 1. Portio pinnæ fructificantis. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

This interesting and very distinct species of *Aspidium* appears to be confined to the island of Jamaica. The specimens here figured were gathered by Mr. Wiles in that country, and presented to us by A. B. Lambert, Esq.

1

2.

5.

3

4

Hymenophyllum dilatatum

D.r Greville del.t

Swan Sc

HYMENOPHYLLUM DILATATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *HYMENOPHYLLUM,* Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, textura frondis, valvis planis, exterius liberis. *Br.*

Hymenophyllum *dilatatum;* glabrum, frondibus bi-tripinnatifidis, pinnis ovatis dichotome divisis decurrentibus, laciniis linearibus obtusis integerrimis, involucris orbicularibus inflatis, stipite superne rachique alatis.

Hymenophyllum dilatatum. *Swartz. Syn. Fil. p.* 149 *et* 373. *Schkuhr. Fil. p.* 131. *t.* 135. *Willd. Sp. Pl. v.* 5. *p.* 533. *Spreng. Syst. Veg. v.* 4. *p.* 132.

Trichomanes dilatatum. "*Forst. Prodr.*"

Hab. In Insulis Maris Pacifici. *Forster.* In Nova Zealandia. *D. Menzies.* Brazil? (*Sprengel.*)

Caudex repens, horizontalis, gracilis, fuscus; lævis hic et illic radicans.

Stipes digitalis, erectus, glaber, basi teres, superne subalata.

Frons, circumscriptione oblongo-ovata, omnino glabra, pinnata, pinnis ovatis subattenuatis, basi in rachin alatam decurrentibus, bipinnatifidis, laciniis subdichotomis, linearibus, costatis, obtusis, integerrimis, terminali longiore; *Substantia* membranacea, sub summo lente minutissime reticulata, siccitate fusca, costa prominente, pallida.

Sori in laciniis terminales versus apicem frondis.

Involucra orbicularia, pallide fusca, bivalvia, valvis hemisphæricis integerrimis.

Receptaculum inclusum, clavatum.

Capsulæ peltatæ, sessiles, pulcherrime reticulatæ, annulo completo dilatato cinctæ.

Semina subangulata, flavescentia.

Fig. 1. Laciniæ cum soro. f. 2. Portio frondis. f. 3. Involucrum apertum cum receptaculo capsularum. f. 4. Capsulæ. f. 5. Semina:—*magn. auct.*

We know not upon what authority Sprengel considers this to be a native of Brazil. The specimens here figured were gathered by Mr. Menzies in New Zealand. It was originally discovered during the first voyage of Captain Cook, by John Reynold Forster.

D.r Greville Del.t

J. Swan Sc

ACROSTICHUM VISCOSUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ACROSTICHUM,* Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Indusium* nullum (nisi squamulæ, v. setæ in quibusdam capsulis interstinctæ). *Br.*

Acrostichum *viscosum;* squamoso-hirsutum, subviscidum, frondibus lineari-lanceolatis acuminatis, basi in stipitem longiusculum squamosum attenuatis; fertilibus linearibus.

Acrostichum viscosum. *Swartz. Syn. Fil. p.* 10 *et* 193. *Willd. Sp. Pl. v.* 5. *p.* 103. *Spreng. Syst. Veget. v.* 4. *p.* 33.

Acrostichum petiolatum. *Swartz. Fl. Ind. Occ. p.* 1588.

Acrostichum salicifolium. *Willd. Herb. Kaulf. Enum. Fil. p.* 58. *Sieber. Syn. Fil. n.* 28. *Spreng. Syst. Veget. v.* 4. *p.* 33.

Hab. In truncos muscis repletos in montibus altis Jamaicæ; et in India Orientali. *Swartz.* Insula Mauritii. *Sieber. Bojer.* Borboniæ. *Desfontaines.* Insula Sancti Vincentii Indiæ Occidentalis. *Rev. L. Guilding.*

Caudex reyens, crassiusculus, dense fusco-squamosus, fibrosus, fibris numerosis, filiformibus, flexuosis, ramosis.

Stipites plurimi ex eodem caudice, subcongesti, graciles, castanei, hinc sulcati, inferne nigri, nitidi, squamis minutis lanceolatis, membranaceis, reticulatis, spinoso-ciliatis obsiti, demum nudi; *sterilium* duas ad tres uncias longi; *fertilium* duplo triplove longiores.

Frondes sex ad octo uncias longæ, erectæ, nunc subfalcatæ, coriaceo-membranaceæ, lineari-lanceolatæ, basi apiceque attenuatæ, integerrimæ, utrinque, statu juniore præcipue, squamuloso-viscidæ, squamis minutissimis membranaceis reticulatis, magis minusve profunde ciliatis: *costa* distincta; *venæ* parallelæ plerumque furcatæ: *frondes fertiles* lineares, sterilibus plerumque longiores.

Capsulæ totam paginam inferiorem frondis tegentes, fuscæ, sphæricæ, stipitatæ; annulo subcompleto cinctæ.

Semina flavo-fusca, limbo tuberculato.

Fig. 1. Capsulæ. f. 2. Semina. f. 3. Squama stipitis. f. 4. Squama frondis:—*magn. auct.*

We have scarcely less pleasure in figuring a species of Fern which has been involved in obscurity, than in making known one which is altogether new. In the present instance we have, from the Island of St. Vincent, given what we believe to be the true *Acrostichum viscosum* of Swartz and Willdenow, of which no representation has hitherto been published. We think, however, that too much stress must not be laid upon the viscid nature of the plant, nor upon the scales of the frond; both of which are liable to vary: and the latter in particular, we know almost entirely disappear with age, remaining on the midrib, and at the margin, and on the underside of the frond, the longest. The scales, too, vary in size and in the relative length of the ciliæ, which sometimes give the appearance of mere stellated hairs to the scales. This kind abounds more on the upper surface of the frond of our specimens from the Mauritius, which can by no fixed character be distinguished from the species of the West Indies

Grammitis furcata.

Dr Greville Del^t

J Swan Sc.

GRAMMITIS FURCATA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *GRAMMITIS*, Sw. *Sori* oblongi, lineares, recti, sparsi. *Indusia* nulla. *Willd.*

Grammitis *furcata;* fronde lineari glabra furcata, apice obtusa, stipite nullo, soris oblongis oblique parallelis.

Hab. Guiana. *C. S. Parker.*

Radix parva, cæspitosa, e fibris plurimis fuscis descendentibus.

Frondes plurimæ ex eadem radice, erectæ, lineares, quatuor ad quinque uncias longæ, duas lineas latæ, medium versus simpliciter furcatæ, margine integerrimæ, subsinuatæ, apicibus obtusis, inferne attenuatæ, sed *stipes* nullus. *Substantia* coriacea, medio costata, nervis simplicibus obscuris, oblique parallelis, sorigeris.

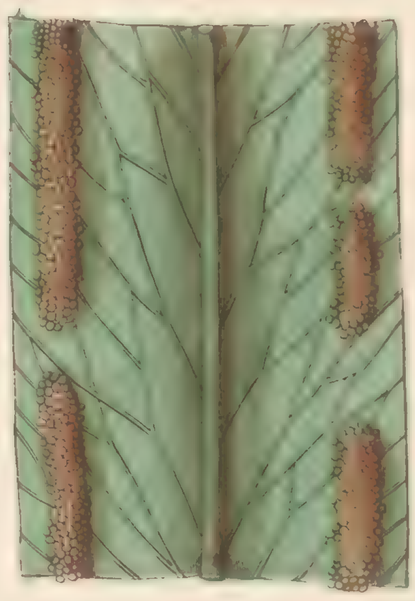
Sori, in laciniis furcarum, oblongi, tumidi, simplici serie, costa utrinque, dispositi.

Capsulæ intense fuscæ, annulo lato incompleto cinctæ, longe stipitatæ.

Semina subrotunda, flavescentia.

Fig. 1. Portio frondis, cum soris. f. 2. Sorus. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

We possess only the single specimen of this distinctly marked species of *Grammitis*, which was brought from Demerara by our valued friend C. S. Parker, Esq. It has the forked habit of some species of *Tænitis*, especially of *T. furcata*, and the divided state of *T. graminifolia;* but the fructification is decidedly that of a *Grammitis*.



Tænitis ≠ interrupta.

Dr Greville Delt

J. Swan Sc

TÆNITIS INTERRUPTA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *TÆNITIS*, Sw. *Sorus* linearis, continuus, quandoque interruptus, longitudinalis, inter costam et marginem exteriorem frondis situs. *Indusium* nullum. *Willd.*

Tænitis *interrupta*; fronde pinnata, pinnis lineari-ellipticis obtusiusculis, soris interruptis.

Tænitis linearis. *Wall. MSS.* (non *Kaulf.*)

Hab. In India Orientali. *Wall.*

Stipes quatuor ad sex uncias longus, erectus, flavo-fuscus, hinc canaliculatus, basi subsquamosus, intense fuscus.

Frons stipite brevior, circumscriptione late ovata, pinnata, pinnis alternis remotiusculis subpatentibus, lineari-ellipticis, parum coriaceis, obscure reticulatim venosis, costatis, integerrimis, apice obtusiusculis, basi acutis, brevissime petiolatis, terminali petiolo sublongiore.

Sori longitudinales, interrupti, prope marginem frondis inserti, involucro nullo.

Capsulæ sphæricæ, annulo lato fere completo cinctæ, pedicellatæ. *Capsulæ* plurimæ abortivæ (f. 3.).

Fig. 1. Portio frondis, cum soro. f. 2. Capsulæ. f. 3. Pedicelli cum capsulis abortivis:—*magn. auct.*

Received from the Honourable the Directors of the East India Company; but from what part of India is not mentioned. Its affinity is evidently with *T. blechnoides* Sw. (*T. pteridioides* of Schkuhr); but that is a vastly larger plant, with the pinnæ remarkably attenuated. Of that species Swartz observes that the capsules are mixed with articulated setæ, terminated by a torulose rounded club. These are doubtless analogous to what we here consider pedicels with abortive capsules—capsules indeed reduced to a portion of the annulus, which is all that is formed of them.

Hemionitis cordata

Dr. Greville Delt.

J. Swan Sc.

HEMIONITIS CORDATA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *HEMIONITIS*, Kaulf. *HEMIONITIDIS pars*, Linn., Sw., Willd. *Capsulæ* venis reticulatis frondis insidentes. *Indusium* nullum. *Kaulf.*

Hemionitis *cordata;* frondibus sterilibus cordato-oblongis fertilibus sub-triangularibus, subtus stipitibusque paleaceo-hirsutis.

Hemionitis cordata. *Roxb. MSS.*

Hab. Ind. Orient. *Roxburgh. D. Shuter.* Ad loca depressa prope Calcuttam, Ind. Orient. *Dr. Wallich.*

Radix cæspitosa, e fibris numerosissimis, gracilibus, valde ramosis, fuscis.

Stipites, plurimi ex eadem radice, tres ad quatuor uncias longi, erecti, flexuosi, hinc canaliculati, atro-purpurei, nitidi, pilis membranaceis fuscis patentibus obsiti; *fertiles* reliquis duplo triplove longiores.

Frondes tres uncias longæ, fusco-virides, subcoriaceæ, obscure reticulatæ, costatæ, supra glabræ, subtus margine paleaceo-hirsutæ; *steriles* oblongo-cordatæ, obtusæ; *fertiles* magis triangulares, sinu lato, profundo.

Capsulæ numerosissimæ in venas reticulatas, areolis oblongis, demum confluentes.

Semina minutissima, fusca.

Fig. 1. Portio frondis venas capsulasque exhibens. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

Desvaux first separated from the *Hemionitides* of Swartz and Willdenow the genus *Gymnogramma* (Tab. xxv.), and Kaulfuss, more recently, that of *Antrophyum* (see Tab. xlvi.); thus reducing *Hemionitis* to the single species *H. palmata*, which certainly had little or no natural affinity with its former associates. With that, however, our present plant entirely agrees, both in general habit and in essential characters. It was discovered many years ago by Dr. Roxburgh; and, in his unpublished Catalogue, is marked generally as an inhabitant of Bengal: and upon the ticket written by Dr. Wallich, which accompanied the specimens kindly communicated by the Honourable the Directors of the East India Company, it is described as flourishing in the rainy season in the neighbourhood of Calcutta. We find beautiful specimens of the same plant in a valuable botanical collection presented to us by the late excellent Dr. Shuter. These specimens, however, have the fronds more acute at the angles than is the case in our plant.

Polypodium longifrons

J. Swan Sc.

POLYPODIUM LONGIFRONS.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *POLYPODIUM*, Sw. *Sori* subrotundi (seriati, sparsi v. conferti). *Involucrum* nullum. *Br.*

Polypodium *longifrons*; stipite subnullo, frondibus lanceolatis acuminatis integerrimis membranaceis reticulatis tenuissime marginatis, basi longe attenuatis, soris ubique sparsis, caudice longissimo.

Polypodium longifrons. *Wall. MSS.*

Polypodium normale? *Don. Prodr. Fl. Nepal. p.* 1.

Hab. India Orientali. *Wall.* In Nepaliâ? *Hamilton.*

Caudex longissime repens, crassus, flexuosus, lignosus, hispido-squamosus, radiculosus, fibris filiformibus, ramosis, fusco-tomentosis.

Stipes subnullus, vel, si mavis, brevissimus, alatus, in frondem sensim superne dilatatus.

Frondes, plurimæ ex eodem caudice, ut videtur, pendentes, sesquipedales et ultra, lanceolatæ, glabræ, membranaceæ, subpellucidæ, reticulatæ, in areolis uniglandulosæ (fig. 1.), integerrimæ, margine subundulatæ, tenuiter incrassatæ, apice acuminatæ, inferne longe attenuatæ, costatæ; *costa* crassa, fusca.

Sori numerosi, hemisphærici, per totam inferiorem partem frondis sine ordine sparsi.

Capsulæ flavo-fuscæ, longe pedicellatæ.

Semina oblonga, subreniformia, pellucida vix colorata.

Fig. 1. Portio frondis, cum soris. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

For our knowledge of this fine species of *Polypodium* we are indebted to the Honourable the East India Company, from whom we have received it with the MS. name here adopted, but without any particular habitat being given. It is, however, probably from Nepal, and is perhaps the same as the *P. normale* of Mr. Don; but the character in the *Prodromus Floræ Nepalensis* of that author is too short to enable us to determine that point satisfactorily.

Blechnum crinitum.

POLYPODIUM CRINITUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. ***POLYPODIUM,*** Sw. *Sori* subrotundi, (seriati, sparsi v. conferti). *Involucrum* nullum. *Br.*

Polypodium *crinitum;* fronde pinnata, pinnis lanceolatis pinnatifidis, laciniis oblongis obtusis subinæquilateralibus integerrimis subtus costa nervisque subpubescentibus, stipite rachique setosis, soris minutis.

Polypodium crinitum. *Poiret in Encycl. Bot. Spreng. Syst. Veget. v.* 4. *p.* 57.

Polypodium thelypteroides? *Desv. in Berl. Mag.* 1811. *p.* 317. *Spreng. Syst. Veget. v.* 4. *p.* 56. (non Sieberi, *Syn. Fil. n.* 50.)

Polypodium fusco-setaceum. *Bojer. MSS.*

Hab. In insula Mauritii: in montibus excelsis, locis umbrosis. *Bojer.*

Caudex subpalmaris, erectus, teres, hinc canaliculatus, nitidus, insigniter setosus, setis longis membranaceis, subulatis, fuscis.

Rachis etiam fusco-setaceus, versus apicem pubescens.

Frons pedalis, circumscriptione ovato-subpyramidalis, pinnata, pinnis plerumque oppositis, subhorizontalibus quadri- ad sex-pollicaribus, lanceolatis, breviter acuminatis, profunde pinnatifidis, fere omnino glabris, costa (setosa) nervisque pubescentibus, laciniis semiunciam longis, paululum falcatis, obtusis, oblongis v. linearioblongis, inæquilateralibus, basi subæqualibus versus apicem sensim minoribus, penninervibus.

Sori biseriales, nervis ultimis seu venulis prope medium utrinque inserti, parvi.

Capsulæ sphærico-subcompressæ, annulo crasso cinctæ, pedicellatæ.

Semina subreniformia, flavescentia, pellucida.

Fig. 1. Pinnæ lacinia, a dorso visa, cum soris. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

The difficulty of distinguishing many of the species of Fern by mere descriptions is, it must be acknowledged, very great. In looking simply at the short character of *P. thelypteroides* given by Desvaux above quoted, it is quite indicative of our present plant; but then he describes it afterwards as having "very *few* leaves (pinnæ), of two inches and a half in length, the frond only five inches long, and the stipes eight or nine inches in length:" in which respects, he tells us, it differs from the *P. crinitum* of Poiret. Poiret's description, again, perfectly agrees with our plant in every thing except in not having the sori inserted upon the extremities of the veins: they are evidently inserted near the middle.

Sieber's *P. thelypteroides* must not be confounded with our plant, similar as it is in the structure of its pinnæ; for it is pubescent on both sides, and the stipes, rachis, costa and nerves, are simply pubescent, quite destitute of setæ.

Tropæolum pentaphyllum.

TAB. LXVII.

PLEOPELTIS PERCUSSA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *PLEOPELTIS*, Humb. *Sori* subrotundi, sparsi. *Indusia* numerosa, peltata, squamæformia, subimbricata. *Spreng.*

Pleopeltis *percussa;* frondibus lanceolatis breviter stipitatis cuspidato-acuminatis margine integerrimis revolutis squamulosis, supra foveis a soris adversæ paginæ ortis instructis, soris solitariis pulvinatis, caudice repenti.

Polypodium percussum. "*Cavan. Prælect.* 1801. *n.* 594." *Swartz. Syn. Fil. p.* 27. *Willd. Sp. Pl. v.* 5. *p.* 151. *Kaulf. Enum. Fil. p.* 90. *Langsd. et Fisch. Ic. Fil. p.* 8. *t.* 6. *Spreng. Syst. Veget. v.* 4. *p.* 47.

Polypodium avenium. *Desv. in Berl. Magaz.* 1811. *p.* 314. *Desv. in Journ. de Bot.* 1814. *p.* 259. *t.* 41.

Polypodium cuspidatum. "*Presl.*" (fide *Spr.*)

Hab. In insulis Marianis inque Para et insula Catharina, Brasiliæ. *Willd.* Apud Rio Janeiro. *Dª Maria Graham. Raddi.*

Caudex repens, ramosus, flexuosus, arcte squamosus, crassitie pennæ corvinæ, hic illic fibroso-radiculosus.

Stipes duas ad tres uncias longus, subsquamosus.

Frondes spithamææ fere ad pedalem, erectæ, lanceolatæ, coriaceæ, virides, costatæ, oculo nudo omnino aveniæ, sub lente venis reticulatis notatæ, integerrimæ, minute squamulosæ, marginibus revolutis, apicibus longe cuspidato-acuminatis, basi in stipitem sensim attenuatæ: supra foveolatæ, foveis a soris in adversa facie positis. *Squamulæ* frondis minutæ, peltatæ, reticulatæ, margine dentatæ.

Involucra plurima in eodem soro, e squamulis peltatis dentatis.

Sori, pro ratione plantæ, magni, hemisphærici seriatim dispositi, solitarii.

Capsulæ numerosissimæ, longe pedicellatæ, sphæricæ, annulatæ, fasciis annulorum rufis. Cum his capsulis pedicelli abortivi numerosi adsunt.

Semina oblonga, intense flava.

Fig. 1. Portio frondis, cum soris involucrisque. f. 2. Portio frondis cum soris vetustis. f. 3. Squamula. f. 4. Capsulæ. f. 5. Pedicelli abortivi. f. 6. Semina:—*magn. auct.*

No author appears to have noticed the scales which cover the younger state of the sori of this plant, constituting that kind of involucre which characterizes the genus *Pleopeltis* of Humboldt. Raddi states it to be an inhabitant of old walls in Brasil.

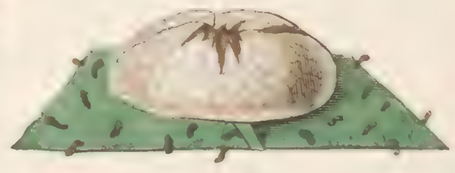
6

3

1

7

2



4

5

Woodsia Perriniana.

WOODSIA PERRINIANA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *WOODSIA*, Br. *Sori* dorsales, subrotundi. *Involucrum* calyciforme apertum laciniatum (margine crinitum *Br.*): includens *Capsulas* pedicellatas: receptaculo communi elevato nullo. *Br.* (paucis verbis mutatis.)

Woodsia *perriniana*; minutissime glanduloso-pilosa, frondibus bipinnatis, pinnis ultimis pinnatifidis segmentis rotundatis bidentatis, soris submarginalibus, involucris subhemisphæricis demum laciniis patentibus dentatis, stipite subpaleaceo.

Alsophila perriniana. *Spreng. Syst. Veget. v.* 4. *p.* 125.

Woodsia sp.? *Torrey MSS.*

Hab. Insula Sancti Thomæ. *Perrin.* In America Septentrionali. *Torrey* (prope Novam Eboracensem). *D. Barratt.*

Radix?

Stipes digitalis et ultra, glaber, nitidus, paleaceo-squamosus, paleis sparsis non raro deciduis.

Frons, circumscriptione lanceolata, ubique pilis minutissimis glandulosis subtus præcipue obsita, bipinnata, pinnis primariis deltoideo-lanceolatis, oppositis, remotiusculis, secundariis oblongis vel oblongo-lanceolatis, pinnatifidis, laciniis rotundatis bidentatis, vel inferioribus rarissime iterum subpinnatifidis, laciniis ultimis bidentatis. *Color* pallide virens, *pinnarum rachi* glanduloso, *frondium* inferne paleaceo.

Sori submarginales, solitarii, in singula lacinia ad dichotomiam venarum insidentes.

Involucrum infra sorum insertum membranaceum album primum hemisphæricum capsulas involvens, sed vertice aperto, demum in lacinias inæquales, patentes, denticulatas dehiscentes, laciniis subovatis, reticulatis, concavis.

Capsulæ sphæricæ, breviter pedicellatæ, annulo incompleto.

Receptaculum commune nullum.

Semina oblongo-rotundata.

Fig. 1. Planta e D. Torrey. f. 2. Eadem e D. Barratt recepta:—*magn. nat.* f. 3. Portio pinnulæ, cum soris. f. 4. Sorus immaturus, involucro nondum expanso. f. 5. Sorus maturus. f. 6. Capsulæ. f. 7. Semina:—*magn. auct.*

We had the good fortune to receive from our valuable correspondent Dr. Torrey, of New York, an authentic specimen of the *Alsophila perriniana* of Sprengel, gathered in the island of St. Thomas, and specimens of a Fern gathered near New York, which upon comparison prove to belong to the same species. Afterwards Dr. Barratt sent it to us also from the United States.

Sprengel has in some degree altered the generic character of Mr. Brown's *Alsophila*, so as to include the present plant: but as the original species of *Alsophila* embrace a tribe of Ferns arborescent and quite different from our plant, as well in aspect as in generic character, we have considered it best to remove *A. perriniana* from that genus altogether.

It would be easy for us, seeing that it does not precisely accord with any described genus of the *Filices*, to have invented a new one. But as our design is rather by a series of well executed figures and descriptions to give a correct idea of the structure of the fructification of Ferns, which may be employed in future for the formation of genera, than too hastily to constitute new ones, we have preferred placing the present plant in the genus *Woodsia*. Its habit, we think, is sufficiently similar; and, except that the involucre is larger in proportion to the sorus, and that, in a young state, it covers more fully the capsules, and is not margined with hairs, there is not a difference even in the character of the fructification. And we are not without an idea, that had the learned Brown himself been acquainted with the present Fern, he might have framed the character so as to have included it also.

Aspidium caryotideum.

—D.r Greville.del.t—

ASPIDIUM CARYOTIDEUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ASPIDIUM*, Br. *HYPOPELTIS*, Mich. *ASPIDII* species, Sw. *Sori* rotundi, dorsales. *Involucrum* orbiculare, peltatum, stipitatum, in medio sori insertum, undique liberum. *Br.*

Aspidium *caryotideum;* fronde pinnata glabra, pinnis subsessilibus rhombeo-lanceolatis valde acuminatis subfalcatis ciliato-serratis, infimis terminalique subtrilobis, intermediis basi superiore unidentato.

Aspidium caryotideum. *Wall. MSS.*

Hab. In India Orientali (Nepal?). *Wallich.*

Caudex, ut videtur, repens, squamosus, hic illic radiculosus.

Stipes pedalis et ultra, pallide fuscus, subteres, hinc sulcatus, basi parce paleaceo-squamosus, superne nudus, glaber.

Frons, stipitis longitudine, circumscriptione oblongo-ovata, pinnata, *pinnis* remotis patentibus, inferioribus oppositis, reliquis alternis, sex pollicaribus, glabris, rhombeo-lanceolatis, inæqualibus, longe acuminatis costatis, oblique venosis, venis, sub lente, reticulatis, marginibus tenuiter ciliato-serratis, basi cuneatis, brevissime petiolatis; *infimis* terminalique trilobis, lobis lateralibus brevioribus acuminatis, *intermediis* margine superiore versus basin dente unico instructo.

Sori in duas lineas, inter venas laterales dispositi, parvi, rotundati.

Involucrum exacte orbiculatum, primum orbiculatum, centro depressum, demum, marginibus recurvis, umbilicatum, peltatum.

Capsulæ subsphæricæ, annulatæ, pedicellatæ, pedicello longissimo, articulato.

Semina minuta, sphærica, marginata, margine tuberculato, flavo-viridia.

Fig. 1. Aspidium caryotideum, $\frac{1}{3}$ diminutum. f. 2. Pinna:—*magn. nat.* f. 3. Portio frondis ut venæ reticulatæ videantur. f. 4. Sorus immaturus involucro tectus. f. 5. Sorus maturus, verticaliter sectus. f. 6. Capsulæ. f. 7. Semina.

This is a very distinctly marked species of *Aspidium*, for which we are indebted to the Honourable the East India Company. The fronds, when seen through a good magnifying lens, present a very beautiful appearance, from the nature of the reticulation. Each areola has a branch of a vein, sometimes simple, sometimes forked, passing upwards, through the centre, but not reaching to the top. These veinlets, probably, though it is difficult to ascertain the fact, are what terminate in the sori.

Nephrodium fragrans.

P.r Greville Del.t

J. Swan Sc.

TAB. LXX.

NEPHRODIUM FRAGRANS.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *NEPHRODIUM,* Mich. *Sori* rotundi, dorsales. *Involucrum* reniforme, sinu affixum, marginibus liberis. *Br.*

Nephrodium *fragrans;* frondibus bipinnatis, pinnulis oblongis obtusis pinnatifidis, segmentis subrotundatis eroso-crenatis, stipite rachique dense ferrugineo-paleaceis.

Nephrodium fragrans. *Richardson in App. to Frankl. Journ. p.* 753.

Aspidium fragrans. *Swartz. Syn. Fil. p.* 51. *Willd. Sp. Pl. v.* 5. *p.* 253. *Hook. in Parry's Second Voy. App. p. . Spreng. Syst. Veget. v.* 4. *p.* 105.

Polypodium fragrans. *Linn. Sp. Pl. p.* 1550. (excl. syn. *Hudsoni.*)

"Dryopteris rubum idæum spirans. *Amm. Ruth.* 251."

Hab. In Sibiria; Dahuria. *Fischer.* Kamtschatka. *Chamisso.* In regionibus arcticis et subarcticis Americæ Septentrionalis. *Richardson.* In insulis Americæ arcticæ. *Parry.*

Caudex brevis, crassus, lignosus, subrepens, radiculosus, frondes plurimas gerens.

Stipes unciam ad duas vel tres uncias longus, dense paleaceo-squamosus, squamis magnis, imbricatis, rufo-fuscis, membranaceis, pellucidis, integerrimis.

Rachis (universalis partialisque) subtus præcipue ferrugineo-squamosus, squamis densis, imbricatis.

Frons, circumscriptione lanceolata, palmaris fere ad spithamæam, bipinnata, pinnis primariis subarcte dispositis, sessilibus, cordato-lanceolatis, obtusis; pinnulis oblongis obtusis, pinnatifidis, segmentis subrotundis, eroso-crenatis. *Color* pulcherrime viridis, subtus pallidior.

Sori contigui, in singulo segmento pinnularum solitarii, majusculi.

Involucrum rotundato-reniforme, convexum.

Capsulæ breviter pedicellatæ, annulatæ.

Semina oblonga, pulcherrime flavo-fusca.

Fig. 1. Pinnula. f. 2. Eadem subtus visa, cum soris. f. 3. Sorus, Involucrumque. f. 4. Capsula. f. 5. Semina: —*magn. auct.*

Of this elegant and rare Northern species of Fern no figure has yet been published. The name is given from the fragrant scent of the species yielding an odour, even in the dried state, not unlike that of the common Primrose.

It is peculiarly an arctic plant; and our finest specimens, from which the accompanying figure is taken, are from the island of Igloolik, where they were gathered by Captain Parry.

2

3

Asplenium ensiforme.

H.ᵗ Greville Del.ᵗ

J. Swan Sc.

ASPLENIUM ENSIFORME.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ASPLENIUM*, Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. *Br.*

Asplenium *ensiforme*; fronde simplici lineari-lanceolata acuminata integerrima, basi in stipitem attenuata, soris costæ oblique parallelis, involucro denticulato reflexo.

Asplenium ensiforme. *Wall. MSS.*

Asplenium Phyllitidis. *Don, Prodr. Fl. Nep. p.* 7?

Hab. In arboribus Nepaliæ. *Wallich.*

Radix cæspitosa, e fibris numerosissimis, capillaribus, ramosis, nigro-fuscis.

Frondes plurimæ ex eadem radice, erectæ, magnitudine variantes, nunc 6—8 pollicares, nunc pedales sesquipedalesque, lineari-lanceolatæ, subcoriaceæ, margine integerrimæ, apice valde acuminatæ, inferne in stipitem bi-quadriunciam longum, sensim attenuatæ. *Stipes* fuscus, basi paleaceo-squamosus, squamis lanceolato-subulatis, intense fuscis. *Costa* frondis subtus prominens, nervis oblique parallelis, simplicibus furcatisve, obscuris.

Sori numerosi, frondis totum dorsum occupantes a basi fere ad apicem, costæ oblique paralleli, *inferiores* fere omnino paralleli, lineares.

Involucrum membranaceum, pallide fuscum, margine denticulatum, cito reflexum atque persistens.

Capsulæ numerosissimæ, sublonge pedicellatæ, intense fuscæ, annulo lato intense flavo.

Semina flavo-fusca, subovalia, nunc margine granulata.

Fig. 1. Portio frondis cum soris. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

We have received specimens of this very distinct *Asplenium* both from Dr. Wallich and the Honourable the Directors of the East India Company. It is probably Mr. Don's *A. Phyllitidis*; but we think ourselves bound to preserve the name given to the plant by its estimable discoverer, Dr. Wallich. There are but few species of the genus with entirely simple fronds; and those have all, except the present species, the sori arranged in a much more horizontal direction from the costa. Here they are in the lower part of the frond, at least, almost parallel with the midrib; and the rest form a very acute angle with it. Another remarkable character is, that the involucrum (besides being denticulate), as soon as it opens, is reflected upon the frond, so as to expose the whole cluster of capsules; and it remains there even after the capsules are dispersed.

Asplenium denticulatum.

D.r Groville Del.t

I. Swan Sc.

TAB. LXXII.

ASPLENIUM DENTATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ASPLENIUM*, Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. *Br.*

Asplenium *dentatum;* fronde lineari-oblonga glabra pinnata, pinnis rhombeo-ovatis dentatis crenatisque deorsum attenuatis integris.

Asplenium dentatum. *Linn. Sp. Pl. p.* 1540. *Swartz. Syn. Fil. p.* 80. *Willd. Sp. Pl. v.* 5. *p.* 324. *Spreng. Syst. Veget. v.* 4. *p.* 86.

Trichomanes latifolium dentatum. *Plum. Fil. p.* 58. *t.* 101. *f.* C.

Hab. In Jamaica. *Swartz.* Hispaniola. *Plumier.* Ex Insula Jamaicæ communicaverunt D. *Wiles et Bancroft.*

Radix cæspitosa, fibrosa, fibris magis minusve longis, tortuosis, fuscis, plerumque hirsutis.

Stipites plurimi ex eadem radice, duas vel tres uncias longi, nonnunquam etiam palmares, fusco-virides, compressi, glabri, superne marginati.

Frondes, circumscriptione, oblongo-lineares, tri-quadripollicares et ultra, pinnatæ, pinnis remotis, glabris, rhombeo-ovatis, obtusis, antice irregulariter crenato-dentatis, deorsum oblique cuneatis, attenuatis, integerrimis. *Rachis* compressa, alata.

Involucra in venis lateralibus, lineari-oblongis.

Capsulæ sphæricæ, sublonge pedicellatæ.

Semina ovali-rotundata, limbata, limbo crenato.

Fig. 1. Pinna cum soris. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

Plumier, who appears to have first detected this Fern in the little island called *La Tortuë*, situated to the north of the *Port de Paix* in St. Domingo, tells us that this plant varies in size and luxuriance very much, according to its situation upon wet or dry rocks.

It will rank near to the *Aspl. viride* and *A. Trichomanis* of our country.

Asplenium Gilliesianum

D.r Greville Del.t

J. Swan Sc.

TAB. LXXIII.

ASPLENIUM GILLIESIANUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ASPLENIUM*, Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. *Br.*

Asplenium *Gilliesianum;* frondibus anguste lanceolatis pinnatis, pinnis flabelliformibus antice laciniatis dentatisque, rachi lævi apice non radicante.

Asplenium Gilliesii. *Hook. in Ex. Flora, p.* 209. (sub descr. *Aspl. flabellifolii*, sine Ic.)

Hab. In fissuris rupium, apud Ceno Grande Uspallata, Andibus. *D. Gillies.*

Radix parva, fibrosa, fibris subsimplicibus, tortuosis, filiformibus, magis minusve hirsutis.

Stipes uncia ad duas uncias longus, gracilis, glaber, viridis, ad basin squamoso-hispidus.

Frons angusto-lanceolata, pinnata, pinnis remotiusculis, alternis, flabelliformibus, tenuissime membranaceis, pallide viridibus, antice sublobatis, lobis subtribus, inciso-crenatis, pinnis ultimis sensim minoribus. *Rachis* lævis, apice nunquam radicante.

Involucra linearia, membranacea, pallide fusca, fere albida.

Capsulæ sphæricæ, articulatæ, pedicellatæ.

Semina ovalia, fusca.

Fig. 1. Pinna, cum soris. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

Discovered by our excellent friend Dr. Gillies on the eastern side of the Andes, looking towards Mendoza. The species had been before noticed in Hooker's *Exotic Flora* under the description of *Asplenium flabellifolium*, a native of New Holland, and which has many points in common with the present. *Aspl. Gilliesianum* may, however, always be distinguished by its much smaller size, more slender and delicate habit, never throwing out roots from the extremity of a leafless rachis.

Antrophyum Borgianum

ANTROPHYUM BORYANUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ANTROPHYUM**, Kaulf. *Sori* lineares, continui, venis frondis reticulatis immersi. *Indusium* geminatum medio dehiscens. *Kaulf.*

Antrophyum *Boryanum;* frondibus oblongo-ellipticis obovatisve acutis, basi in stipitem longum attenuatis, "venis fructificantibus elevatis."

Antrophyum Boryanum. *Spreng. Syst. Veget. v.* 4. *p.* 67.

Hemionitis Boryana. *Willd. Sp. Pl. v.* 5. *p.* 128.

Hemionitis reticulata? *Bory, Voy. v.* 1. *p.* 214. *Sieber, Syn. Fil. n.* 64.

Hab. Insula Mauritii, ad arborum radices, (*Bory, Sieber, Carmichael,*) et in campis sylvestribus locis umbrosis in monte *Pouce* dicta. *Bojer.*

Radix fibroso-ramosa, fibris densissime villosis fuscis, longe repentibus descendentibusque.

Caudex, ut videtur, nullus.

Stipes digitalis ad palmarem, compressus, basi paleaceo-setosus.

Frons palmaris ad pedalem, coriaceo-membranacea, oblongo-elliptica, non raro superne latior, margine ubique integerrimo, apice acuto, basi in stipitem attenuata, ecostata, pulcherrime venis elevatis reticulata, areolis oblongis angulatis 4—5 lineas longis.

"Venæ fructificantes prominentes." *Willd.*

We possess specimens of this noble Fern, of which we have only represented here some of the smaller states, from the late Captain Carmichael, from M. Bojer, and Dr. Sieber, all of them destitute of the fructification. In some parts of the frond, indeed, the veins are darker than in others; but on the most careful dissection, they contain no sori. Willdenow describes the fructification as elevated, not immersed, as it is in *Antr. pumilum* and *A. reticulatum.*

All the species seem to possess very thickly downy roots.

* Nomen e Græco *αντρον* antrum, et *φυω* nascor.—*Kaulf.*

Lindsæa polymorpha.

J.ᵗ Greville Del.ᵗ

TAB. LXXV.

LINDSÆA POLYMORPHA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *LINDSÆA,* Dryand. *Sori* lineares, margine paralleli sæpiusque approximati. *Involucrum* ex apicibus venarum (rima plurium) ortum ducens, exterius liberum. *Br.*

Lindsæa *polymorpha;* fronde lineari-lanceolata pinnata, pinnis ovato-oblongis basi oblique cuneatis flabelliformibusque margine superiore serratis, infimis nonnunquam pinnulatis, involucris denticulatis.

Lindsæa polymorpha. *Wall. MSS.*

Hab. In India Orientali. *Wallich.*

Caudex repens, squamulosus, pennæ corvinæ crassitie, radiculoso-fibrosus, fibris flexuosis, subramosis, rigidis, fuscis.

Stipes, exemplaribus fructificantibus, digitalis ad palmarem, *sterilibus* multo brevior, erectus, glaber, nitidus, hinc canaliculatus, inferne atro-fuscus.

Frondes quadri-quinquepollicares, circumscriptione, angusto- vel lineari-lanceolatæ, nunc apice attenuatæ, pinnatæ, pinnis inferioribus, statu adultiore, iterum pinnatæ. *Pinnæ* vel *pinnulæ* forma variantes, *sterilium* plerumque ovato-oblongæ, margine superiore denticulatæ, inferiore truncatæ, integerrimæ, basi cuneatæ; *fertilium* flabelliformes; *omnes* radiato-nervosæ, nervis dichotomis, soris terminatis, glabris, nitidis.

Sori lineares, ad marginem superiorem pinnarum continui, exterius dehiscentes, pallide fusci, membranacei, sub lente reticulati, margine denticulati.

Capsulæ sphæricæ, annulo fere integro inæquali crasso cinctæ, longe pedicellatæ.

Semina opaca, subrotundo-angulata, flavescentia.

Fig. 1. Pinna cum soro. f. 2. Portio involucri cum capsulis. f. 3. Ejusdem portio, magis aucta. f. 4. Semina: —*magn. auct.*

So sportive are the forms of the pinnæ in many of the species of this genus, that it is difficult to characterize them in words. We have given the present plant under the name by which we received it from the Honourable the East India Company: at the same time we must observe that it comes very near to the *Lindsæa flabellata* of Dryander, in the third volume of the *Transactions of the Linnean Society,* p. 41. t. 8. f. 2. That species, however, differs from ours, in being more decidedly bipinnate, in having most of the pinnæ larger, regularly flabelliform, and in the apices of the fronds and compound pinnæ being obtuse.

Hymenophyllum badium.

Dr Greville Del.

TAB. LXXVI.

HYMENOPHYLLUM BADIUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *HYMENOPHYLLUM,* Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra involucrum bivalve, textura frondis, valvis planis, exterius liberis. *Br.*

Hymenophyllum *badium;* fronde lanceolata bipinnatifida, laciniis lineari-oblongis obtusis integerrimis glabris, inferioribus bifidis, soris raris in lacinia inferiori, involucris rotundatis.

Hab. In India Orientali. *Wallich.*

Caudex repens, filiformis, gracilis, ramosus, intricatus, fibroso-radiculosus.

Stipes etiam filiformis, bi-triuncialis, superne alatus.

Frons, circumscriptione, ovato-lanceolata, 4—5 pollicaris, bipinnatifida, segmentis primariis ovato-lanceolatis, laciniis lineari-oblongis, obtusis vel emarginatis, non raro inferioribus bifidis. *Textura* frondis ex areolis parvis. *Color*, siccitate, fusco-badius. *Costa* fusca.

Involucra rara, præcipue versus apicem frondium, in lacinia inferiore ad superiorem partem segmentorum, solitaria, terminalia, rotundata, bivalvia, valvis concavis, integerrimis.

Sori inclusi.

Capsulæ paucæ, breviter pedicellatæ, sphærico-compressæ, columellam brevem terminantes, annulo integro, obliquo.

Semina angulata, et, ut videtur, ternatim congesta.

Fig. 1. Pars frondis cum involucro f. 2. Portio laciniæ. f. 3. Sorus. f. 4. Semina:—*magn. auct.*

Presented to us by the Honourable the East India Company, as discovered by Dr. Wallich in the Company's possessions, but sent without any specific name. We have named it from the singular colour of the frond, which is common to all our dried specimens.

Hymenophyllum crispatum.

J. Swan Sc.

TAB. LXXVII.

HYMENOPHYLLUM CRISPATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *HYMENOPHYLLUM,* Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra involucrum bivalve, textura frondis, valvis planis exterius liberis. *Br.*

Hymenophyllum *crispatum;* fronde ovato-acuminata bi-tripinnatifida integerrima glabra, laciniis lato-linearibus obtusiusculis, involucris ovatis, stipite rachique alatis undulato-crispatis.

Hab. In Nepalia. *Wallich.*

Caudex repens, filiformis, radiculoso-fibrosus, fibris hirsutis.

Stipes biuncialis, basi teres, filiformis, superne alatus, alis insigniter crispatis.

Frons digitalis fere ad palmarem, ovata, acuminata, nunc lato-lanceolata, superne simpliciter pinnatifida, versus medium bipinnatifida, basi tripinnatifida, segmentis primariis circumscriptione lanceolata, ubique integerrima, atro-viridis, glabra, laciniis lato-linearibus, obtusiusculis, rachi late alata, ala undulata.

Involucra, præcipue versus apicem frondis, ovata, valvis concavis, integerrimis.

Columella (vel receptaculum capsularum) perbrevis, ad apicem capsulas gerens.

Capsulæ orbiculares, vix pedicellatæ, annulo integro subobliquo cinctæ.

Semina angulata, pellucida, subreticulata.

Fig. 1. Portio frondis cum involucris. f. 2. Valva involucri cum soro. f. 3. Semina:—*magn. auct.*

Allied to the West Indian *Hymenophyllum undulatum* of Swartz and Willdenow; but that has the laciniæ undulated, and the stipes destitute of wings.

Trichomanes minimum.

J. Swan Sc.

TAB. LXXVIII.

TRICHOMANES VENOSUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *TRICHOMANES,* Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *venosum;* frondibus pinnatis, pinnis linearibus venosis crenato-repandis: inferioribus basi lobatis v. pinnatifidis intusque unifloris. *Br.*

Trichomanes venosum. *Br. Prodr. Fl. Nov. Holl. p.* 159. *Spreng. Syst. Veget. v.* 4. *p.* 129.

Hab. Apud Port Jackson Novæ Hollandiæ: et insulam Van Dieman. *Brown.* In Nova Zealandia. *A. Menzies.*

Caudicem non vidimus.

Stipes gracillimus, capillaris, subflexuosus, nudus, compressus, hinc canaliculatus.

Rachis filiformis, superne solummodo alatus.

Frons, circumscriptione, ovata vel lanceolata, pinnata, pinnis linearibus obtusis, glabris, pulcherrime reticulatis, crenato-repandis, inferioribus remotis basi superiore auriculatis, superioribus confluentibus, terminali elongata. *Costa* flexuosa, nervis dichotome ramosis.

Involucra solitaria, in singula pinna prope basin marginis superioris inserta, oblonga, margine alata, ore aperto, subdilatato.

Columella longa, inserta, basi capsulifera.

Capsulæ rotundatæ, compressæ, peltatæ, annulo crasso integro.

Semina subglobosa, fusca.

Fig. 1. Pinna cum soro. f. 2. Portio frondis. f. 3. Columellæ pars inferior cum capsulis. f. 4. Capsulæ. f. 5. Semina:—*magn. auct.*

A very distinct species of *Trichomanes,* belonging to a small tribe of the genus, having truly pinnated fronds.

Botrychium tánuginosum

Dr Greville Del.

J. Swan Sc.

TAB. LXXIX.

BOTRYCHIUM LANUGINOSUM.

FILICES.—Ophioglosseæ. *Br.*, *Kaulf.*, *Spreng.* Stachyopterides. *Willd.*

Gen. Char. ***BOTRYCHIUM,*** Sw. *Capsulæ* distinctæ, in spica disticha composita, respectu cujus transversim quoad insertionem longitudinaliter dehiscens. *Br.*

Botrychium *lanuginosum;* scapo superne unifrondoso, fronde ovato-deltoidea bipinnatifida, pinnis ovatis inciso-pinnatifidis dentatis, bulbo lanigero.

Botrychium lanuginosum. *Wall. MSS.*

Hab. In India Orientali (Nepalia?). *Wallich.*

Radix e fibris plurimis, longis, simplicibus, carnosis, crassis, superne bulbifera.

Bulbus ovatus, subsquamosus, apice lanigerus.

Scapus 4—6 uncialis, erectus, teres, flavo-viridis, basi nigro-fuscus, frondem infra apicem gerens.

Frons, circumscriptione, late ovata fere deltoidea, 3—4 uncias longa, bipinnatifida, glabra; pinnis inferioribus remotis segmentis iterum pinnatifidis, superioribus coadunatis, omnibus ovatis inciso-dentatis, dentibus acutis.

Spica composita, pinnata, pinnis distichis vel secundis.

Capsulæ plurimæ, sessiles, flavo-fuscæ, ad unum latus spectantes, sphæricæ, glabræ, demum transversim dehiscentes.

Semina pallide flavescentia, viridi-punctata.

Fig. 1. Portio frondis. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

The name of *lanuginosum* appears to have been given to this species by Dr. Wallich in consequence of a woolly substance which is attached to the upper part of the bulb; but this does not appear very distinctly on our specimens, which have been communicated by the Honourable the East India Company. In general aspect, the plant has much affinity with the North American *B. dissectum;* but there the frond is placed much lower down upon the stem or scape, and the foliage is much more compound or divided.

Ophioglossum lusitanicum.

Dr Greville Del^t

J. Swan Sc.

TAB. LXXX.

OPHIOGLOSSUM LUSITANICUM.

FILICES.—Ophioglosseæ. *Br., Kaulf., Spreng.* Stachyopterides. *Willd.*

Gen. Char. *OPHIOGLOSSUM,* Linn. *Capsulæ* nudæ in spicam articulatam, disticham connatæ, uniloculares, transverse dehiscentes, bivalves. *Willd.*

Ophioglossum *lusitanicum;* spica caulina sublonge pedunculata, fronde lanceolata in petiolum attenuata.

Ophioglossum lusitanicum. *Linn. Sp. Pl. p.* 1518. "*Brot. Lusit. v.* 2. *p.* 401." *Lam. Ill. t.* 864. *f.* 3. *Willd. Sp. Pl. v.* 5. *p.* 59. *Swartz. Syn. Fil. p.* 169. *Spreng. Syst. Veget. v.* 4. *p.* 22.

Ophioglossum angustifolium minimum. "*Barr. rar.* 1280. *t.* 252. *f.* 2."

Hab. In Lusitania, Corsica. Circa Neapolim. *D. W. H. F. Talbot.* In agro Tingitano. *Salzman.* In Insula Madeiræ. *Rev. R. T. Lowe.*

Radix, tuber oblongus, solitarius, fibrosus, fibris crassiusculis, simplicibus ramosisque.

Frondes plerumque duæ ex eadem radice, unciam vel duas uncias longæ, lanceolatæ, vel lineari-lanceolatæ, integerrimæ, virides, enerves, sub lente reticulatæ, inferne in stipitem subæque longum, flexuosum, flavum, ad basin squama membranacea, fusca, lanceolata instructum, attenuatæ.

Pedunculus ad basin frondis insertus, fronde plerumque longior, erectus, teres.

Spica parva, linearis, semiunciam longa, e capsulis sex vel octo, arcte connatis, flavis, composita.

Semina minuta, flava.

Fig. 1. Plantæ:—*magn. nat.* f. 2. Spica. f. 3. Semina:—*magn. auct.*

A small, and we believe very distinct species, which was supposed for a long time to be an inhabitant of Spain only. We have lately received specimens from Naples (the smaller specimen here figured), gathered near that city by Mr. Talbot; and from Tangiers (the larger specimen represented), collected by M. Salzman. Since our figure was engraved, we have received excellent specimens from the Rev. R. T. Lowe, gathered in the Island of Madeira.

Polybotrya cervina.

TAB. LXXXI.

POLYBOTRYA CERVINA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *POLYBOTRYA*, Humb. *Capsulæ* pinnulas frondis disparis lineares undique dense tegentes. *Indusium* nullum. *Kaulf.*

Polybotrya *cervina;* frondibus sterilibus pinnatis, pinnis ovato-lanceolatis inæquilateralibus integerrimis marginatis, fertilibus bipinnatis, pinnis linearibus, pinnulis oblongis planiusculis.

Polybotrya cervina. *Kaulf. Enum. Fil. p.* 55. *Spreng. Syst. Veg. v.* 4. *p.* 33.

Olfersia cervina. *Presl. in Reliq. Hænk. p.* 14.

Acrostichum cervinum. *Syn. Fil. p.* 14. & 200. *Willd. Sp. Pl. v.* 5. *p.* 120.

Osmunda cervina. *Linn. Sp. Pl. p.* 1521.

Osmunda, Linguæ Cervinæ foliis. *Plum. Fil. p.* 132. *t.* 154.

β. Foliis lanceolatis.

Hab. In India Occidentali, Jamaica, Martinica, locis umbrosis. *Swartz.* Insula Sancti Vincentii. *Rev. L. Guilding.* β. In sylvis Jamaicæ. *D. Bancroft.*

Caudex repens, brevis, densissime fusco-squamosus, radiculosus, fibris ramosis, hirsutis.

Stipites plurimi ex eodem caudice, pedales vel bipedales erecti, semiteretes, facie anteriore sulcati, inferne squamosi, flavo-fusci.

Frondes sub-bipedales; steriles et fertiles distinctæ.

Steriles simpliciter pinnatæ (juniores lanceolatæ, simplices). *Pinnæ*, 11—13, fere sessiles, alternæ, spithamææ et ultra, ovato-lanceolatæ, coriaceæ, acuminatæ, marginatæ, integerrimæ; *basi superiore* gibbosæ; *inferiore* oblique cuneatæ costatæ; nervis numerosis parallelis, basi ramosis. *Color* læte viridis.

Fertiles bipinnatæ: *Pinnæ* lineari-lanceolatæ, fere horizontales, alternæ, 3 ad 6 uncias longæ: *Pinnulæ* subopositæ, semiunciam longæ, patentes, planiusculæ, capsulis undique tectæ.

Capsulæ numerosæ, fuscæ, annulo fere completo cinctæ, pedicellatæ, sphæricæ.

Fig. 1. Frons juvenis. f. 2. Frondis adultæ sterilis portio. f. 3. Frondis fertilis portio. f. 4. Pinnæ cum capsulis. f. 5. Capsulæ.

The genus *Polybotrya* was founded by Humboldt and Kunth upon the species *P. osmundacea:* and the character was made to depend upon the capsules occupying the whole circumference of the fertile pinnules. We possess, from Jamaica, a Fern that we can in no point distinguish from this of Humboldt; but in which the young fertile pinnæ have the capsules only on one side, while in their more advanced state the capsules appear on all sides of them. This difference in appearance, in all probability, arises from the revolution or reflexion of the margin of these pinnæ: and it perfectly accords with what Dr. Swartz says of the present plant, which he has seen in a growing state, and of which he observes, that "in an old state the fructification appears to be on both sides, in consequence of the revolution of the margin of the pinnæ." If such be really the case, and if it exists in all the species of *Polybotrya*, then the genus is scarcely distinguishable from *Acrostichum*.

No author, as far as we know, has noticed the *young*, quite simple, fronds of this species. The Rev. Mr. Guilding has sent them to us in that state.

2

1

Botrychium simplex.

D.r Greville Del.t

J. Swan Sc.

BOTRYCHIUM SIMPLEX.

FILICES.—Ophioglosseæ. *Br.*, *Kaulf.*, *Spreng.* Stachyopterides. *Willd.*

Gen. Char. *BOTRYCHIUM*, Swartz. *Capsulæ* distinctæ, in spica disticha composita, respectu cujus transversim quoad insertionem longitudinaliter dehiscentes. *Br.*

Botrychium *simplex*; scapo unifrondoso, fronde ternata pinnatifidave, segmentis cuneato-obovatis incisis.

Botrychium simplex. *Hitchc. in Silliman's Journ. of Sc. v.* 6. *p.* 103. (*Eaton*). *Eaton's Manual of Botany, p.* 237.

Hab. Prope Deerfield, Massachusetts, America Septentrionali. *Torrey.* In Canada. *Pursh.* (fide specim. in Herb. Lambert.)

Radix e fibris paucis, simplicibus, brevibus, crassiusculis.

Scapus unciam ad tres uncias longus, erectus, subteres, basi subbulbosus, infra medium, vel nonnunquam versus apicem, frondem gerens.

Frons uncialis ad triuncialem, exemplaribus *minoribus* ternata vel trifida, *majoribus* pinnatifida, segmentis obovato-cuneatis, ramis integris, plerumque bifidis vel magis minusve incisis. *Rachis* compressa, lata.

Spica composita, pinnata, pedunculata, pedúnculo magis minusve elongata, pinnis distichis vel subsecundis.

Capsulæ secundæ, rotundatæ, compressæ, bifidæ, fere bipartitæ, flavo-fuscæ.

Semina sphærica, parva, pellucida, flava.

Fig. 1. Capsulæ. f. 2. Semina.

Botrychium simplex seems to be a plant liable to much variation in regard to size. The smaller specimen here figured, which we received from our zealous friend Dr. Torrey, seems to be the state which gave rise to the specific name and character in Silliman's Journal:—but we have received a plant through the kindness of Mr. Lambert, gathered by Pursh in Canada, which we can by no means distinguish from that just mentioned, except that it is twice the size, has the frond decidedly pinnatifid, and the segments much cut. This is the larger specimen here represented. Both varieties are abundantly distinguished from any species with which we are acquainted.

Hymenophyllum semibivalve.

Greville Del.

J. Swan Sc.

TAB. LXXXIII.

HYMENOPHYLLUM SEMIBIVALVE.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *HYMENOPHYLLUM,* Smith. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, textura frondis, valvis planis, exterius liberis. *Br.*

Hymenophyllum *semibivalve;* frondibus bipinnatifidis lanceolatis glabris, laciniis linearibus obtusis glabris immarginatis, involucris rotundato-urceolatis semi-immersis, parte superiore solummodo bivalvi.

Hab. In Insula Novæ Zeelandiæ. *D. Menzies.*

Planta omnino glabra.

Caudex gracillimus, repens, filiformis, hic illic fibris minutis fuscis radicans.

Stipes longitudine variat, duas vel tres lineas longus ad bipollicarem, filiformis, fuscus.

Frons, circumscriptione, lanceolata, duas ad tres uncias longa, unciam lata, statu *juniore* simpliciter pinnatifida, *adulta* bipinnatifida, laciniis paucis subunilateralibus, linearibus, obtusis, omnino integerrimis. *Costa* distincta. Reticulationis *areolæ* parvæ, rotundatæ. *Color,* siccitate, olivaceo-fuscus.

Sori in laciniis præcipue versus apicem, vix infra medium, frondis, terminales, suburceolati, parte inferiore immersi, superiore solummodo bivalvi, valvis semiorbicularibus.

Capsulæ paucæ, fuscæ, peltatæ, rotundatæ, compressæ, annulo integro cinctæ.

Receptaculum breve, inclusum.

Semina oblonga, subangulata, obscure reticulata, flavescentia, semipellucida.

Fig. 1. Portio frondis cum soris. f. 2. Involucrum. f. 3. Portio receptaculi, cum capsulis duabus. f. 4. Semina:—*magn. auct.*

We are indebted to Mr. Menzies for specimens of this New Zealand *Hymenophyllum.* The name of "*Hym. asplenioides*" was upon the label which accompanied them, written probably by mistake, since that is a West Indian species, and described amongst those which have *simple* fronds.

The present individual is remarkable for the structure of its involucre, which may be reckoned almost intermediate between that of *Trichomanes* and *Hymenophyllum;* the lower half, or even more, being sunk into the extremity of the frond, and the upper portion forming two short almost semicircular lips or valves.

Hymenophyllum hirsutum.

Delt. J. Swan Sc.

TAB. LXXXIV.

HYMENOPHYLLUM HIRSUTUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *HYMENOPHYLLUM,* Smith. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, textura frondis, valvis planis, exterius liberis. *Br.*

Hymenophyllum *hirsutum;* (stellatim hirsutum); fronde pinnata, pinnis linearibus obtusis nunc bifidis digitatisve, stipite hirsuto.

Hymenophyllum hirsutum. *Swartz. Fl. Ind. Occ. v.* 3. *p.* 1746. *Syn. Fl. p.* 146. *Willd. Sp. Pl. v.* 5. *p.* 517. *Spreng. Syst. Veget. v.* 4. *p.* 134. *Reliq. Hænk. p.* 69. *Raddi, Fil. Brasil. p.* 66. *t.* 79. *f.* 3.

Trichomanes hirsutum. *Linn. Sp. Pl. p.* 1561.

Trichomanes rigidum. "*Hedw. Fil.* (in icone *T. fragile* est nuncupatum.)"

Filicula digitata. *Plum. Fil. p.* 73. *t.* 50. *B?*

Hab. In Hispaniola? *Plumier.* Ad truncos arborum in umbrosis montium altissimorum Jamaicæ. *Swartz., D. Lunan.* In Insula Trinitatis. *D. Lockhart.* Brasil. *Raddi.* In montanis Peruviæ ad Huanocco. *Hænke.*

Caudex gracillimus, filiformis, repens, radiculis fibrosis pilosis hic illic descendentibus.

Stipes quoque gracillimus, duas lineas etiam ad duas vel tres uncias longus, fuscus, superne subalatus, paululum hirsutus.

Frons forma variat, nunc, circumscriptione, ovata, et unciam vel sesquiunciam longa, nunc bi-tripollicaris, circumscriptione lanceolata, pinnata, pinnis infimis solummodo liberis, reliquis decurrentibus, coadunatis, (et ita pinnatifida est frons,) linearibus, obtusis, inferioribus bifidis, palmatisve (*Swartz.*), vel etiam pinnatifidis (*Hænke*), omnibus costatis, costa tenui aterrima, et undique pulcherrime stellatim villosis.

Sori præcipue in pinnis laciniisve superioribus frondis, solitarii, terminales.

Involucrum, ad margines præcipue, stellato-pilosum; parte inferiore cuneata, immersa, superiore libera, bivalvi, valvis semiorbicularibus.

Receptaculum parvum, inclusum.

Capsulæ parvæ, fuscæ, peltatæ, annulo integro cinctæ.

Semina ovalia, subpellucida, pallide fusco-flavescentia.

Fig. 1. Pinnæ vel laciniæ frondis. f. 2. Portio apicis pinnæ fertilis cum soro. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

Much as this plant is liable to vary in the length of the stipes and shape of the frond, we can still scarcely satisfy ourselves that the reference of authors to Plumier is correct. His plant is thrice the size of ours, every where deeply bipinnatifid, and having a distinctly winged stipes. Yet that is probably the original authority of Linnæus. Raddi is disposed to refer it to his *Hymenophyllum Boryanum.*

In our specimens the fronds might rather be called pinnatifid than pinnate; and the segments are never more than bifid, more frequently quite entire.

Trichomanes humile.

Dr. Greville Delt.

J. Swan Sc.

TAB. LXXXV.

TRICHOMANES HUMILE.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *TRICHOMANES*, Smith. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *humile;* fronde lanceolata bipinnatifida glabra marginata, laciniis linearibus obtusis integerrimis, involucris oblongo-cylindraceis, ore bilabiato.

Trichomanes humile. "*Forst. Prodr. n.* 464. *Hedw. Fil. Ic. fasc.* 3." *Swartz. Syn. Fil. p.* 143. *et p.* 371. *Willd. Sp. Pl. v.* 5. *p.* 507. *Spreng. Syst. Veget. v.* 4. *p.* 129.

Hab. In Societatis Insulis. *Forster.* Insula Otaheite. *Menzies.*

Caudex repens, gracilis, filiformis, tomentosus, hic illic radiculosus, radicibus capillaribus ramosis.

Stipes duas ad tres uncias longus, glaber, filiformis.

Frondes tri-, rarius quadri-pollicares, circumscriptione, lato-lanceolatæ, bipinnatifidæ, glabræ, atro-virides, pulcherrime reticulatæ (areolis suborbicularibus majusculis), costatæ, marginatæ, laciniis linearibus obtusis, nunc apice bifidis.

Sori marginales, subaxillares, solitarii.

Involucra oblongo-cylindracea, marginata, ore bilabiato.

Receptaculum filiforme, sublonge exsertum, basi incrassatum.

Capsulæ intra involucrum inclusæ, peltatæ, annulo magno, articulato, subplicato cinctæ.

Semina sub summo lente reticulata, subsphærica, pallide flava, hyalina.

Fig. 1. Portio frondis cum soris. f. 2. Portio frondis ut reticulationes et margo videantur. f. 3. Involucrum verticaliter sectum. f. 4. 4. Capsulæ. f. 5. Semina:—*magn. auct.*

Hedwig and Willdenow describe the margin of this rare species of *Trichomanes* as serrated or serrulated. We find no such appearance in our specimens, gathered by Mr. Menzies in Otaheite; nor does its original discoverer Forster, nor Swartz (who seems to have described it from authentic specimens), notice such a peculiarity. The margined appearance of the frond arises not from a thickening of the very edge, but from a nerve running along, parallel with, but at a little distance from, the margin, and which is connected with the margin by means of transverse veins or bars.

Acrostichum Jamesoni.

Dr. Greville Delt.

J. Swan Sc.

TAB. LXXXVI.

ACROSTICHUM JAMESONI.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ACROSTICHUM*, Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) vel ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ vel setæ in quibusdam capsulis interstinctæ). *Br.*

Acrostichum *Jamesoni;* piloso-squamosum, frondibus simplicibus costatis, sterilibus oblongo-spathulatis, fertilibus ellipticis marginatis demum conduplicatis.

Hab. Rupibus prope basin montis Pichincha regno Quitensi. *D. Jameson.*

Planta cæspitosa.

Stipes duas ad tres uncias longus, erectus, paululum flexuosus, gracilis, squamosus, squamis lanceolatis, membranaceis, serratis, nervoso-reticulatis, fuscis.

Frondes vix unciam longæ, costatæ, enerves.

Steriles oblongæ, obtusæ, virides, utrinque margineque squamosæ, squamis brevioribus latioribusque quam in stipite.

Fertiles sterili breviores, ellipticæ, fuscescentes, pellucido-marginatæ, dorso margineque fusco-squamosis: primum explanatæ, demum, capsulis maturis, longitudinaliter conduplicatæ.

Capsulæ numerosissimæ, intense fuscæ, globosæ, annulo lato cinctæ, breviter pedicellatæ.

Semina fusca, subrotundata, tuberculata.

Fig. 1. Squama e stipite. f. 2. Squama e fronde. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

Communicated, with several other rarities of this family, from South America by William Jameson, Esq., resident at Guayaquil. The species is unquestionably very nearly allied to *Acrostichum obtusatum*, figured at Tab. 22. of this work: but that, besides its widely different geographical situation (the Island of Tristan da Cunha), has fewer and narrower scales upon the frond and stipes, a longer pedicel to the capsules, and a much less distinct costa or midrib; and it wants the pellucid margin to the fertile fronds, which is so distinct in this.

Mr. Jameson has remarked a curious property in the fertile fronds. "When the plant," he says, "is in a young and tender state, their fronds are invariably *expanded;* but as soon as the seeds begin to ripen, they *collapse*, as in the specimens sent;" and as the generality of those here figured.

The *Acrostichum piloselloides* of Presl. (*Reliq. Hænk.*), *A. Pilosella*, Spreng., a Peruvian plant, differs from this in its almost sessile and spathulate sterile fronds; and the *Acrostichum spathulatum* of Bory (from the Isle de Bourbon), by its much larger size and differently-shaped fronds. They should, however, all together, with our *Acrost. Raddianum*, rank next to each other in a natural system.

Lindsæa sagittata.

Dr. Greville Del.

J. Swan Sc.

TAB. LXXXVII.

LINDSÆA SAGITTATA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *LINDSÆA,* Dryand. *Sori* lineares, margine paralleli sæpiusque approximati. *Involucrum* ex apicibus venarum (una plurium) ortum ducens, exterius liberum. *Br.*

Lindsæa *sagittata;* fronde simplici sagittata cordatave acuminata. *Dryand.*

Lindsæa sagittata. *Dryand. in Linn. Trans. v.* 3. *p.* 40. *Swartz. Syn. Fil. p.* 118. *Willd. Sp. Pl. v.* 5. *p.* 520. *Spreng. Syst. Veget. v.* 4. *p.* 79.

Adiantum sagittatum. *Aubl. Pl. de Guian. p.* 964. *t.* 366.

Hab. In sylvis Guianæ, et in fissuris rupium. *Aubl.* In insula Guadaloupe. (*Sprengel.*)

Caudex repens, inferne radiculosus.

Stipes erectus, semiteres, aterrimus, nitidissimus.

Frondes 3—4 uncias longæ, cordatæ vel sagittatæ, apice acuminatæ, basi sinu profundo, angulis acutis, submembranaceæ, virides, radiato nervosæ, nervis dichotome ramosis, infra marginem terminantibus.

Sori dorsales, intramarginales, lineares, hic illic interrupti.

Involucrum membranaceum, extus liberum.

Capsulæ sphæricæ, sublonge pedicellatæ.

Semina minutissima, flava, semipellucida, ternatim congesta.

Fig. 1. Portio frondis marginis cum soro. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

The only specimens of this rare Fern that we have seen, were kindly communicated to us by the Baron Delessert, and they were gathered in French Guiana. Sprengel has given Guadaloupe as an additional station for the plant.

Asplenium trichophyllum.

D.r Greville Delt.

J. Swan Sc.

TAB. LXXXVIII.

ASPLENIUM TRIPHYLLUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ASPLENIUM,* Linn. *Sori* lineares, dorsales, sparsi. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. *Br.*

Asplenium *triphyllum;* frondibus (non raro bulbiferis) linearibus bipinnatis, pinnulis binis vel ternis cuneatis obtusis costatis pellucidis integris vel bifidis, rachi discolori, soris subsolitariis.

Asplenium triphyllum. *Presl. in Reliq. Hænk. p.* 45. *Spreng. Syst. Veget. v.* 4. *p.* 88.

Hab. In rupibus umbrosis prope verticem montis Pichincha (regno Quitensi). *D. Jameson.*

In Cordilleris Peruviæ ? *Presl.*

Plantæ subsolitariæ.

Stipes brevis, una cum rachi filiformis, nitidus, fuscus.

Frons plerumque simplex, nunc apice dichotome ramosa, nonnunquam bulbifera et prolifera, 4—6 uncias longa, circumscriptione linearis vel lineari-lanceolata, bipinnata, pinnis vix semiunciam longis, inferioribus ternatis, superioribus simplicibus, versus medium binis, pinnulis oblongo-cuneatis obtusis, costatis, pellucidis, teneris, integerrimis, apice emarginato vel bifido.

Sorus in singula pinnula solitarius, majusculus.

Involucrum membranaceum, pallide fuscum, lineari-oblongum.

Capsulæ minutæ, longe pedicellatæ, annulo crasso cinctæ.

Semina subovalia, rugosa, intense fusca.

Fig. 1. Plantæ:—*magn. nat.* f. 2. Planta bulbifera:—*magn. nat.* f. 3. Pinna, cum soro. f. 4. Capsulæ. f. 5. Semina:—*magn. auct.*

In habit the present very delicate species of *Asplenium* is allied to our *Aspl. Gilliesianum,* to the *Aspl. stoloniferum, tenue* and *ternatum,* of Presl. in ***Reliq. Hænk.:*** but besides the different shape of the pinnæ, those species have the stipes and rachis of the same colour with the frond. Here it is dark-brown, almost black.

Gymnogramma Lovei

J.Swan Sc

TAB. LXXXIX.

GYMNOGRAMMA LOVEII.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *GYMNOGRAMMA*, Desv. *Sori* oblongi, venis frondis simplicibus furcatisve inserti. *Indusium* nullum.—Frondes *pinnatæ*, *bipinnatæ decompositæque*. Desv.

Gymnogramma *Loveii*; frondibus pinnatis, pinnis oblongo-lanceolatis pinnatifidis summis confluentibus undique pilosis, laciniis ovalibus obtusis integerrimis, stipite rachique pubescentibus.

Hab. In rupibus madidis Insulæ Madeiræ; montibus, ad alt. 2000 ped. legit *Rev. R. T. Lowe.*

Caudex longe repens, teres, glaber, nigro-fuscus, hic illic fibras ramosas tomentosas emittens.

Stipites plurimi ex eodem caudice, spithamæi et ultra, semiteretes, hinc sulcati, basi dilatati, undique pubescentes, fusci.

Frondes, circumscriptione, ovato-lanceolatæ, spithamææ, fere ad pedales, pinnatæ, pinnis lato-lanceolatis, acutis, sessilibus, pinnatifidis, utrinque hirsutis, inferioribus remotiusculis alternis, superioribus confluentibus, costatis, pinnatim nervosis, laciniis ovalibus obtusis integerrimis, ciliatis, pilis ad marginem sæpe basi unitis. *Rachis* pube fusco obtecta.

Sori numerosi, lineari-oblongi, in singulo nervo, simplices, omnino nudi.

Capsulæ globosæ, fuscæ, reticulatæ, annulo articulato lato, fere completo cinctæ, breviter pedicellatæ.

Semina subglobosa oblongaque, lævia, fusca.

Fig. 1. Portio pinnæ, cum soris. f. 2. Pili e margine laciniarum. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

In the autumn of last year (1827), together with many other excellent plants we were favoured with specimens of this Fern by the Rev. Mr. Lowe, gathered in the Island of Madeira, "near P^tu^ Pargo, in a narrow ravine, and in other places in the interior, growing at an elevation upon the mountains of more than 2000 feet*, upon rocks, and steep and moist banks, where there is but a thin stratum of vegetable mould:—the root or caudex creeping extensively just beneath the surface." The plant is assuredly not described in any work to which I have had access: but Mr. Lowe suggests, that it may probably be the *Acrostichum pilosum* of Von Buch's List of Plants of the Canary Isles; and that the same name (but equally without description or character) likewise exists in a manuscript catalogue of Madeira Plants, which he has seen in the island, purporting to be taken from the Banksian Library, and probably left there by Masson: but the identity of the two plants we have no means of determining. An *Acrostichum* the plant assuredly is not; and though we have placed it in the genus *Gymnogramma*, it seems to form a connecting link between it and *Grammitis*, having the habit of the former, and the constantly simple sori of the latter.

The species we have named in compliment to the gentleman who sent us such fine specimens, and who has accompanied them by some valuable observations: and we feel that he is justly entitled to this honour, not merely because he has brought so interesting a plant under our notice, but because, still resident in Madeira, he is furthering the cause of science by collecting materials, which he will soon be enabled to give to the world, for a *Flora* and *Fauna* of the island. Already he possesses many novelties in the different departments of natural history; and perhaps no spot could be pointed out, whether its geographical situation or its geological features and structure be considered, which better deserves to have its productions described, than that island.

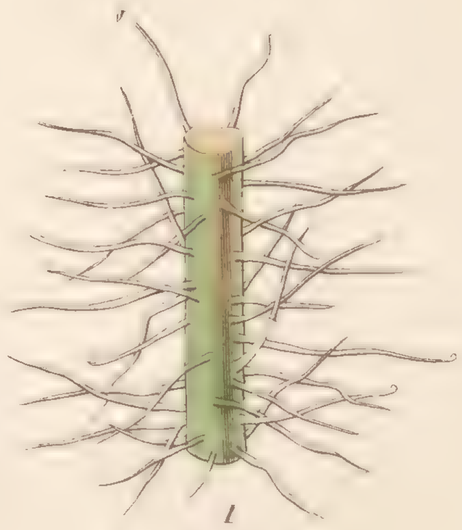
We have only very recently received Schlechtendal's *Adumbrationes Plantarum*, in which we find a species of *Cryptogramma* from the Cape of Good Hope, represented and described, which has a very near affinity with this, *Gymnogramma totta*, Schlecht. That, however, has very much longer and narrower pinnæ, and the lower laciniæ erose; whereas they are quite entire in our plant.

* Since the above was written, we have received more specimens of the same plant, gathered in the Ribeiro d'Ametade, at an elevation of 3000 feet above the level of the sea. It scarcely descends below 2000 feet.

4

3

2



1

Gymnogramma rutafolia.

—D.r Greville Del.t— —J. Swan Sc.—

TAB. XC.

GYMNOGRAMMA RUTÆFOLIA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *GYMNOGRAMMA,* Desv. *Sori* oblongi, venis frondis simplicibus furcatisve inserti. *Indusium* nullum.—Frondes *pinnatæ, bipinnatæ decompositæque;* radices *cæspitosæ.* Desv.

Gymnogramma *rutæfolia;* fronde pinnata pubescente, pinnis cuneiformibus integris incisisve. *Br.*

Grammitis rutæfolia. *Br. Prodr. Fl. Nov. Holl. p.* 146. *Spreng. Syst. Veget. v.* 4. *p.* 41.

Hab. Insula Van Dieman. *Brown. D. Fraser.*

Radix nigro-fusca, cæspitosa, e fibris plurimis ramosis.

Tota *planta,* subtus stipes rachisque præcipue, hirsuto-pubescens, pilis pellucidis, rigidiusculis, acutis.

Stipites breves, vix unciam longi, flexuosi.

Frondes pinnatæ, vix duas uncias longæ, pinnis 6—9, alternis, remotiusculis, ovato-cuneatis, rigidiusculis, integris vel inciso-lobatis, summis confluentibus.

Sori venis furcatis inserti, demum in unam massam, pinnarum dorsum omnino tegentes, congesti.

Capsulæ sphæricæ, fuscæ, sublonge pedicellatæ.

Semina intense fusca, limbo semipellucido.

Fig. 1. Portio stipitis. f. 2. Pili. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

As *Grammitis* now stands in the recently published *Systema Vegetabilium* of Professor Sprengel, it contains none but species with simple fronds. At Tab. 6. of our *Icones Filicum* we have, however, given a species which has the fronds pinnatifid; and at Tab. 89. one with the fronds bipinnatifid. In those species which have compound fronds, we find the nerves to be more ramified; and by the union of two sori at the forking of a nerve, the sori themselves appear to be divided. This at least is the character of M. Desvaux's *Gymnogramma;* and hence it may be considered as intermediate between *Grammitis* and *Hemionitis,* where the nerves are much branched and reticulated, and the sori form a continued series. If the genus should prove permanently distinct from *Grammitis,* we think that this and the following species *Gymn. subglandulosa* will be rightly placed in it.

Gymnogramma subglandulosa.

Dr Greville del.t

J. Swan Sc.

TAB. XCI.

GYMNOGRAMMA SUBGLANDULOSA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *GYMNOGRAMMA,* Desv. *Sori* oblongi, venis frondis simplicibus furcatisve inserti. *Indusium* nullum.—Frondes *pinnatæ, bipinnatæ, decompositæque;* radices cæspitosæ.

Gymnogramma *subglandulosa;* fronde pinnata pubescenti-subglandulosa, pinnis pinnatifidis, lobis rotundatis integris vel incisis.

Hab. In Nova Hollandia. *D. Fraser.*

Radicem nondum vidimus.

Tota planta pilis succulentis, pellucidis, pallide fuscis ubique tecta. Hi *pili* semper obtusi sunt, et, ad apicem, *glandula* abortiva vel imperfecta terminati: infra apicem, etiam, non raro constricti. (f. 2.)

Stipes unciam vel duas uncias longus.

Frons, circumscriptione, lanceolata, 4, fere ad 6 uncias longa, pinnata, pinnis oppositis remotis submembranaceis, plerisque ovatis (basi apiceque subcuneatis, minus divisis) breviter petiolatis, pinnatifidis, lobis rotundatis subincisis.

Sori pallide fusci, simplices vel furcati.

Capsulæ sublonge pedicellatæ.

Semina parva, obscure limbata.

Fig. 1. Portio stipitis. f. 2. Pili. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

In what part of New South Wales this curious species of *Gymnogramma* was found we are not informed. We at first took the specimens for very luxuriant states of *Gymn. rutæfolia:* but a more careful examination soon convinced us of our error. The plant is more than twice the size of that species, the pinnæ are distinctly pinnatifid, of a more membranaceous texture, and (what will afford a still better character,) the nature of the pubescence, although it may appear to the naked eye the same in both, is here not composed of short setiform hairs, but of obtuse linear ones, having what appears an abortive gland at the extremity; that is, irregular in its shape, and not filled with any secreting fluid. Below the apex, too, are not unfrequently a contraction and a brown mark.

Asplenium fæniculaceum.

TAB. XCII.

ASPLENIUM FŒNICULACEUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ASPLENIUM*, Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. *Br.*

Asplenium *fœniculaceum;* frondibus triplicato-pinnatis, pinnulis anguste linearibus acutissimis, soris solitariis.

Asplenium fœniculaceum. *Humb. et Kunth, Nov. Gen. v.* 1. *p.* 13. *Ejusd. Syn. Pl. Æq. p.* 80. *Spreng. Syst. Veget. v.* 4. *p.* 90.

Asplenium delicatulatum. *Presl. Reliq. Hænk. p.* 47. *t.* 7. *f.* 3 ?

Hab. In umbrosis Novæ Andalusiæ, locis temperatis. *Humboldt.* In Cordilleris Quitensibus ? *Hænke.* In truncis arborum locis sylvestribus ad declivitatem occidentalem montis Pichincha, regno Quitensi. *D. Jameson.*

Caudex repens, filiformis, pilosus, hic illic radiculosus, fibris capillaribus ramosis hirtis.

Stipites plurimi, ex eodem puncto, digitales et ultra, erecti, graciles, glabri, basi fuscescentes, subteretes, dein virides, hinc canaliculati, superne marginati.

Frondes, circumscriptione ovato-acuminatæ, basi truncatæ, triplicato-pinnatæ, glabræ, pallide virides, segmentis ultimis seu pinnulis angustis, linearibus, acutissimis, superne bipinnatæ. *Rachis* universalis partialisque ubique glabræ, margine alatæ.

Sori oblongo-lineares, solitarii, et, ob angustatem laciniarum, non raro prope marginem siti, ut in subgenere *Dareæ*, Sm. (*Cænopteridis*, Swartz.)

Involucrum membranaceum, albidum.

Capsulæ sphæricæ, longe pedicellatæ.

Semina subangulata, intense fusca.

Fig. 1. Portio pinnæ cum soris. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

Sent to us by our valued correspondent Mr. Jameson, who gathered the specimen on the western declivity of the mountain Pichincha, where Humboldt and Bonpland discovered some of their most valuable plants. We find it to agree entirely with the *Aspl. fœniculaceum* of Humboldt and Kunth; and we scarcely know whether to consider the *Aspl. delicatulum* of Presl. in *Reliquiæ Hænkeanæ*, to be otherwise than a starved variety of it. It is also nearly allied to *Asplenium fragrans* of Swartz (a Jamaica plant), and to the East Indian *Asplenium concinnum* of Wallich, but has narrower and more distantly placed pinnæ. The sori are almost exactly as in the *Darea* of Smith, (*Cænopteris* of Swartz).

Kiphobolus rupestris.

Dr. Greville Del.

J. Sowerby

TAB. XCIII.

NIPHOBOLUS RUPESTRIS.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *NIPHOBOLUS*, Kaulf. *Sori* subrotundi, congesti, terminales, pilis stellatis obtecti. *Spreng.*

Niphobolus *rupestris;* frondibus integerrimis tomentosis subtus incanis, sterilibus obovatis oblongisve, fertilibus linearibus, soris sparsis parum confluentibus, surculo squamoso radicante ramosissimo. *Br.*

Niphobolus rupestris. *Spreng. Syst. Veget. v.* 4. *p.* 44.

Polypodium rupestre. *Br. Prodr. Fl. Nov. Holl. v.* 1. *p.* 146.

Hab. Apud Port Jackson, Nov. Holl. *Br.*, *D. Fraser.* In Nova Zeelandia. Cult. in Hort. Bot. Glasg.

Radix e fibris numerosis nigro-fuscis ramosis.

Caudex repens, "ramosissimus," squamis minutis dense obsitus.

Stipes biuncialis, basi squamosus, dein nudus.

Frondes coriaceæ, ubique densissime piloso-stellatæ, tomentosæ, dorso virides, subtus incanæ; *steriles*, nostris speciminibus, nunc fere exacte ovales, obovatæ vel oblongæ, integerrimæ, vix sesquiunciam longæ; *fertiles* lineares, vel lineari-lanceolatæ, sterilibus duplo longiores, integerrimæ, basi attenuatæ, apice obtusiusculæ; omnes costatæ, costa subtus prominente.

Sori præcipue versus extremitatem frondis prominentes, fusci, approximati et subconfluentes.

Capsulæ, pili stellati stipitati et *semina* fere omnino ut in *N. bicolore.*

Fig. 1. Pili frondis. f. 2. Pili e soris. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

Mr. Brown has already observed, that this plant is allied to *Polypodium stellatum* (*N. bicolor* of this work) and to *P. adnascens;* and all are downy with the same curiously stellated pubescence.

We are indebted to Mr. Lindley for some of our specimens of this plant, and which are marked as coming from New Zealand; but we know not by whom gathered.

Sciphobolus spharocephalus.

F. Greville Del.

C. Sowerby Sc.

TAB. XCIV.

NIPHOBOLUS SPHÆROCEPHALUS.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *NIPHOBOLUS*, Kaulf. *Sori* subrotundi, congesti, terminales, pilis stellatis obtecti. *Spreng.*

Niphobolus *sphærocephalus*; frondibus simplicibus coriaceis, sterilibus oblongo-lanceolatis acutis, basi subrotundatis petiolatis glabris, fertilibus linearibus acuminatis basi in petiolum attenuatis subtus stellatim tomentosis, soris ovalibus distinctis.

Polypodium sphærocephalum. *Wallich MSS.*

Hab. Ex India Orientali (e Nepalia?) misit *D. Wallich*. In arboribus, ut videtur, crescit.

Caudex longus, flexuosus, ramosus, crassitie pennæ corvinæ, squamis ovatis, acutis, imbricatis, scariosis tectus, hic illic radiculosus.

Frondes steriles fertilibus dissimiles, coriaceæ.

Steriles breviter stipitatæ, 4—5 uncias longæ, lato- vel oblongo-lanceolatæ, integerrimæ, utrinque glabræ, siccitate margine revolutæ, costatæ, penninerviæ, nervis obscuris, apice acutæ, basi rotundatæ.

Fertiles pedales, lineares vel lineari-lanceolatæ, integerrimæ, margine subrevolutæ, superne glabræ, subtus (costa prominente excepta) lana compacta alba e pilis pulcherrime stellatis, ubique tectæ, apice acuminatæ, basi in petiolum bi-triuncialem sensim attenuatæ.

Sori numerosi, magni, convexi, oblongi, lineatim dispositi, primum pilis stellatis pedicellatis albis omnino tecti.

Capsulæ longe pedicellatæ.

Semina oblonga, subreniformia, non raro, ad utramque extremitatem, appendiculo aucta, flava.

Fig. 1. Portio frondis cum soro statu juniore, atque pilis stellatis tectæ. f. 2. Eadem cum soro, capsulis maturis. f. 3. Pili stellati e soro. f. 4. Pili stellati e frondis pagina inferiore. f. 5. Capsulæ. f. 6. Semina:—*magn. auct.*

Whether or not the sterile fronds of this plant are in a young state clothed on the underside, like the fertile frond, with pubescence, I am not able to say. In our specimens they are quite glabrous. The species is, in any case, abundantly distinct from all of the genus with which we are acquainted, and the texture is remarkably thick and coriaceous.

Hemionitis villosum.

D^r. Wallich Delt.

J. Swan Sc

TAB. XCV.

ACROSTICHUM VILLOSUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *ACROSTICHUM,* Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ, vel setæ in quibusdam capsulis interstinctæ). *Br.*

Acrostichum *villosum;* ubique ferrugineo-villosis, frondibus simplicibus oblongo-lanceolatis acuminatis membranaceis, fertilibus multo minoribus villosissimis.

Acrostichum villosum. *Swartz. Syn. Fil. p.* 10. *Fl. Ind. Occ. p.* 1592. *Willd. Sp. Pl. v.* 5. *p.* 103. *Lam. Ill. t.* 865. *f.* 4. (mala.) *Spreng. Syst. Veget. v.* 4. *p.* 34.

Lingua cervina villosa minor. *Plum. Fil. p.* 110. *t.* 127. (vix bona quoad marginem et hirsutiem.)

Hab. Ad latera muscosa depressa montium Jamaicæ Australis. *Swartz.* Ex Jamaica etiam *D. Bancroft* et *Wiles* communicaverunt. In Hispaniola. *Plum.*

Caudex brevis, subrepens, piloso-squamosus. *Radices* plurimæ, filiformes, ramosæ, fuscæ, hirsutæ.

Stipites aggregati, 4—6 uncias longi, ferrugineo-villosi, pilis longis horizontalibus.

Frondes oblongo-lanceolatæ, membranaceæ, acuminatæ, utrinque margineque pilis numerosis longis patentibus rufo-ferrugineis vestitæ, costatæ, penninerviæ, nervis ad marginem attingentibus, in nostris exemplaribus omnino integerrimæ (margine subcrenulatæ l. fere integræ, leviter undulatæ. *Sw.*). *Pili,* sub lente visi, subulati, membranacei, concavi, reticulati, apice serrulati. *Color* fusco-viridis. *Frondes fertiles* sterilibus duplo minores, utrinque, superne præcipue, pilis numerosis ferrugineis villosissimæ.

Capsulæ fuscæ, pedicellatæ.

Semina parva, ovalia, reticulata.

Fig. 1. Portio frondis sterilis. f. 2. Capsulæ. f. 3. Semina. f. 4. Pilus:—*magn. auct.*

We are the more anxious to figure this species of Fern, because it has, by Dr. Sieber, been confounded with an East Indian species of the same genus, namely *Acrostichum hybridum* (*Ic. Fil. t.* 21.); but from that it is distinguished by its much smaller size, more acuminated apex; and especially by the numerous reddish hairs, which spring not only from the margin, midrib, nerves, and stipes, but also from the whole superficies of the frond, both above and below, giving the entire plant a very singular appearance.

The Plumierian figure, which Dr. Swartz mentions with approbation, is by no means good as to the margin of the fronds and in the glabrous upper sides; nor is the representation given by Lamarck at all more satisfactory.

2

3

1

Aspidium furfuraceum.

ASPIDIUM PROLIFERUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ASPIDIUM*, Br. *HYPOPELTIS*, Mich. *ASPIDII species*, Sw., Willd. *Sori* rotundi, dorsales. *Involucrum* orbiculare, peltatum, stipitatum, in medio sori insertum, undique liberum. *Br.*

Aspidium *proliferum;* frondibus simplicibus, glabris, sterilibus lanceolatis longe acuminatis radicantibus, fertilibus linearibus obtusis.

Hab. In Insula Jamaicæ?

Radix cæspitosa, fibrosa, fibris ramosis hirsutis fuscis.

Stipes perbrevis, vix semiunciam longus, sensim in frondem dilatatus.

Frondes plurimæ ex eadem radice, digitales ad spithamæam, simplices, decumbentes, lanceolatæ, basi attenuatæ, apice longissime acuminatæ, radicantes, proliferæ, utrinque glabræ, medio costatæ, margine integerrimo: *Fertiles* sterilibus angustiores, erectæ, lineares, apice obtusæ.

Sori serie simplici ad utrumque latus costæ dispositi, magni; venis obscuris inserti.

Involucrum orbiculare, peltatum, medio umbilicatum.

Capsulæ fuscæ, sublonge pedicellatæ.

Semina intense fusca, oblonga, rugosa, margine limbo pellucido flavescente cincta.

Fig. 1. Portio frondis fertilis. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

We regret that we are not able to say what is the native country of this plant. It was given to us some time ago by our friend Mr. Lindley, with several West India Ferns, which had formed part of the Herbarium of the late Mr. Donn, of Cambridge. The Fern to which it is most nearly allied in the mode of growth and proliferous habit, and in the structure of the sori and seeds, is the *Aspidium rhizophyllum*, figured at Tab. 59. of this work: but that has, except in the very youngest state of the plant, decidedly pinnated fronds; whereas here, both in the sterile and fertile fronds, there is not the slightest approach to a compound, or even to a divided appearance. The whole plant, too, is quite glabrous.

Parkeria pteridoides

—J.Swanson—

PARKERIA PTERIDOIDES.

FILICES.—Div. PARKERIACEÆ. (*Capsulæ* sparsæ, omnino sessiles, annulo lato brevissimo fere obsoleto, nonnunquam distincto subcompleto, notatæ. *Semina* magna, trigona, striata.) GLEICHENEÆ. *Bory*, *Spreng*.

GEN. CHAR. *PARKERIA*, Hook. *Capsulæ* irregulariter dehiscentes, *annulo*, vel *disco*, striato, minuto, fere obsoleto.

PARKERIA *pteridoides*; frondibus sterilibus pinnatifidis, laciniis subternis late ovatis incisis, fertilibus tripinnatifidis laciniis linearibus, stipite inferne tumido.

Parkeria pteridoides. *Hook. in Exot. Fl. t.* 147. (ubi capsulæ seminaque male repræsentantur,) et *t.* 231.

HAB. In aquis stagnantibus Guianæ, apud Demerara. *D. Parker.*

Radix e fibris longis, descendentibus, numerosissimis, fusco-purpureis, villosis.

Stipites plurimi ex eadem radice, crassi, teretes, inferne tumidi, et quasi inflati, venosi, subsquamosi, virides, dein fusci, valde cellulosi; frondium *sterilium* horizontales, breves; *fertilium* erecti, 4—5-pollicares.

Frondes steriles et fertiles dissimiles.

Steriles natantes, stellatim dispositæ, tres ad quinque uncias longæ, circumscriptione deltoideo-ovatæ, carnoso-membranaceæ, pallide virides, costatæ, costa ramosa, reticulatæ, pinnatifidæ, laciniis late ovatis, subternis, fere trilobis atque incisis; sinubus proliferis.

Fertiles semipedales et ultra, erectæ, circumscriptione subtriangulares, tripinnatifidæ, sinubus proliferis, laciniis linearibus, attenuatis, tereti-compressis, ultimis furcatis, primum viridibus dein flavo-fuscis, costatis, venis utrinque parallelis, capsuliferis, reticulatim connexis. *Rachis* hinc sulcata.

Involucrum e margine lato frondis, tenui, membranaceo, subdiaphano, reticulatim venoso, replicato, totum dorsum tegens.

Capsulæ venis costæ parallelis insidentes, pro ratione plantæ majusculæ, pallide fuscæ, omnino sessiles, sphæricæ, quasi tuberculatæ (ob seminum pressuram), tenuissime membranaceæ, diaphanæ, irregulariter dehiscentes, sub summo lente reticulatim venosæ, (venis flexuosis,) et hinc, prope basin, obsoletissime annulatæ, annulo lato, paululum gibboso, transversim striato, striis subquinque.

Semina pauca (15—20) in singula capsula, magna, trigona, pallide fusco-flavescentia, subpellucida, angulis striis concentricis pulcherrime notatis; intus materie oleosa repleta.

Fig. 1. Frondes steriles. f. 2. Frons fertilis:—*magn. nat.* f. 3. Portio laciniæ frondis fertilis a dorso visa. f. 4. Eadem, facie anteriore visa. f. 5. Eadem, involucro aperto, ut receptacula capsularum videantur. f. 6. Ejusdem pars:—*magis aucta.* f. 7. Capsulæ cum annulo obsoleto, seu disco striato. f. 8. Portio membranæ capsulæ cum annulo:—*magis aucta.* f. 9. Capsula dehiscens. f. 10. Semina. f. 11. Eadem:—*magis aucta.* f. 12. Integumentum seminis, cum ejus materie oleosa (f. 13.):—*omnes magis minusve magnitudine auctæ.*

The kindness of our friend C. S. Parker, Esq. (after whom this singular and beautiful genus had previously been named in the *Exotic Flora*), by putting into our possession numerous specimens in all stages of growth, and the opportunity we have enjoyed of seeing the noble individual here figured flourishing in the stove of the Liverpool Botanic Garden under the skilful management of the Messrs. Shepherds,—have enabled us to correct some very important errors which appear in the work just mentioned, and to lay before the public, we trust, a complete analysis of the plant.

The Figure above referred to at Tab. 231. of the *Exotic Flora*, represents the sterile fronds of the plant, of the very existence of which we were not aware, when the first Figure in that work (t. 147.)

appeared. But the point that needs most correction is, where it is said that the capsule is altogether destitute of a ring. It is so minute, however, as to have wholly escaped the notice not only of the author of *Exotic Flora*, but also of that of other and very acute botanists, who examined the specimens. An *annulus* indeed does exist; but so small, and so unlike that part in other Ferns, that we may well be pardoned for having overlooked it: nor should we now probably have detected it, were we not led to suspect its presence by knowing that some other Ferns now in our possession, most closely allied to this, are furnished in their capsules with a *remarkably* large, very broad, and almost complete ring. The Ferns we allude to are the *Ceratopteris thalictroides* of Brongniart (*Ellebocarpus oleraceus* of Kaulf.), from the East Indies;—what we take for *Ceratopteris Gaudichaudii* of Brongn., said to be from St. Vincent;—and one, if not two, nearly allied plants, from New Holland. There could not be a question of all these belonging to the same natural group; and upon examining with the high power of the microscope the capsules of our *Parkeria*, we find on one side, near the point of insertion, a small oblong transversely striated spot or disk, which may indeed be compared with a very reduced annulus of *Ceratopteris*, but which can on no account be assimilated to that of the *Filices Gyratæ* of Mr. Brown.

Since we have now ascertained an annulus to be present, or something analogous to it, we can no longer allow the genus to be separated from the *Filices:* but it becomes a question, to which of the Divisions it should belong. Brongniart (see *Dict. Classique*, *v.* 3. *p.* 350.) and Bory de St. Vincent have ranked the *Ceratopteris* with the *Gleicheneæ;* the former indeed, doubtfully,—and he expressly points out a difference in the nature of the annulus; broad and flat and incomplete* in *Ceratopteris*, narrow and projecting and complete in the *Gleicheneæ*. Indeed the whole nature of the capsules is different in the two, though that difference is not easily expressed in words. They are large in *Ceratopteris* and *Parkeria*, quite sessile, of so thin and membranous and pellucid a texture, that the seeds are visible through the coat; and, even in *Ceratopteris*, the ring does not appear to have any elastic property, nor are these capsules arranged in *sori*, but scattered upon longitudinal veins beneath the *involucre*. The seeds (incorrectly given in the *Exotic Flora*, but well defined by Mr. Brown) are large, and when seen under the high power of a microscope exhibit a most beautifully striated appearance. Their integument is comparatively thick and tough, and, when broken, it is found to contain a transparent oily substance, which floats upon the table of the microscope. In short, the whole habit of the plant, its place of growth, the situation of the capsules, their structure and that of the seeds,—all point out a group or tribe which cannot well be associated with any hitherto established. On this account we have formed a new one.

The Parkeriaceæ are exclusively tropical plants, inhabiting Asia, Africa and America; and we are at present acquainted with but two genera,—*Ceratopteris*, distinguished by its very large and distinct annulus; and our *Parkeria*. Of the latter we possess two species, *Parkeria pteridoides* and *P. Lockharti*†.

M. Brongniart attributes a double covering to the capsule of *Ceratopteris;* but such a structure we have never found to exist in any of our specimens.

* We are aware that Mr. Brown attributes to his *Teleozoma* (Brongniart's *Ceratopteris*) a *complete annulus:* but we have not found it to be so in any of our specimens.

† *P. Lockharti;* frondibus fertilibus pinnatis, pinnis pinnatifidis incisis, stipite æquali cylindraceo.

Hab. In lacubus prope Arima, Insula Trinitatis. *D. Lockhart.*

Adiantum pentadactylon

TAB. XCVIII.

ADIANTUM PENTADACTYLON.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ADIANTUM*, Linn. *Sori* marginales, punctiformes vel lineares. *Involucrum* e margine frondis replicato, disco venoso capsulifero, limbo membranaceo, libero. *Br.*

Adiantum *pentadactylon;* fronde tripinnata, pinnulis petiolatis teneris ovato-rhombeis acuminatis inciso-lobatis, lobis serratis, basi oblique cuneatis, soris oblongis solitariis ad apicem loborum.

Adiantum pentadactylon. "*Langsd. et Fischer, Ic. Fil. t.* 25." *Kaulf. Enum. Fil. p.* 206. *Willd. Sp. Pl. v.* 5. *p.* 448. *Spreng. Syst. Veget. v.* 4. *p.* 114.

Adiantum, *n.* 1817. *Burchell Mss.*

Hab. In Insula St. Catherinæ Brasiliæ. *Langsdorf. Chamisso.* Prope Rio de Janeiro. *D. Burchell. D^a. Maria Graham.*

Stipes spithamæus et ultra, aterrimus, nitidissimus.

Frons fere longitudine stipitis, circumscriptione deltoidea, bipinnata, pinnis inferioribus longis iterum divisis, pinnulis alternis remotiusculis, petiolatis, petiolo gracillimo, sesquiunciam ad duas uncias longis, teneris, opacis, ovato-rhombeis, acuminatis, inciso-lobatis, lobis oblongis serratis, basi inæquali et oblique cuneatis, integris. *Nervi* numerosi, repetitim dichotome divisi, e basi radiatim expansi. *Color* intense viridis. *Rachis* universalis partialisque aterrimæ, nitidæ.

Sori ad apicem loborum, solitarii.

Involucrum transverse oblongum, subtus capsuliferum.

Capsulæ fuscæ, sphæricæ, sublonge pedicellatæ.

Semina triangularia, pellucida, pallida.

Fig. 1. Pinna cum soris. f. 2. Apex lobi fertilis. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

Our friend Mr. Burchell, as well as Mrs. Graham, have been so obliging as to communicate this very handsome species of Fern to us. Willdenow, correctly enough, compares it with the *Ad. trapeziforme:* but that has shorter, less acuminated *pinnules*, never deeply inciso-lobate at the margin as in our plant, which appears to be truly distinct from that and every other of the genus, and confined to the neighbourhood of Rio, in Brazil.

Acrostichum aposodum

TAB. XCIX.

ACROSTICHUM APODUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ACROSTICHUM,* Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ, vel setæ in quibusdam capsulis interstinctæ). *Br.*

Acrostichum *apodum;* frondibus simplicibus oblongo-lanceolatis teneris sessilibus, basi longe attenuatis apice acuminatis, utrinque margineque (præcipue) squamuloso-pilosis, fertilibus multo minoribus.

Acrostichum apodum. *Kaulf. Enum. Fil. p.* 60. *Spreng. Syst. Veget. v.* 4. *p.* 34.

Hab. In Insula Montserrat. "*Ryan* in *Herb. Vahl.*" Insula Sancti Vincentii. *Rev. L. Guilding.*

Caudex brevis, crassus, horizontalis, superne squamis numerosissimis, fulvis, lineari-lanceolatis, serratis obsitus, inferne radiculis filiformibus ramosis pilosis obtectus.

Stipes nullus.

Frondes plurimæ fere ex eodem puncto caudicis, subpedales, erectæ, oblongo-lanceolatæ, teneræ, membranaceæ, costatæ atque furcatim parallelo-nervosæ, apice breviter acuminatæ, basi longe attenuatæ, utrinque sed margine costaque præcipue squamuloso-pilosæ, squamulis subulatis fuscis. *Color* læte viridis. *Frons fertilis* sterili duplo triplove minor.

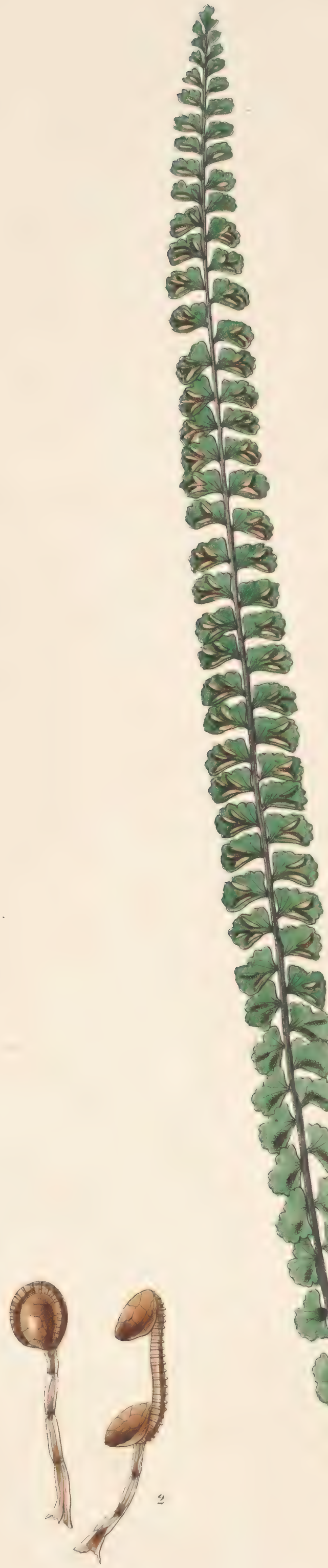
Capsulæ numerosissimæ, dorsum frondis totum tegentes; fuscæ, sphæricæ, pedicellatæ.

Semina pallida, fusca, pellucido-reticulata, ovali-oblonga, vel subreniformia.

Fig. 1. Squamula e caudice. f. 2. Squamula e fronde. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

This very beautiful and distinct species of *Acrostichum* seems to have been described only by Kaulfuss from specimens gathered at Montserrat. We are indebted for our plants to our most liberal friend the Rev. L. Guilding, who has so sedulously collected the Ferns as well as other plants of St. Vincent.

One of our specimens has the upper half contracted, and clothed on the underside with capsules; whilst the lower half is of the usual breadth, and sterile.



2

1

3

Asplenium Menziesii.

J. Swan Sc.

ASPLENIUM MENZIESII.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ASPLENIUM*, Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. *Br.*

Asplenium *Menziesii;* fronde lineari pinnata, pinnis rhombeo-oblongis obtusissimis coriaceis glabris, margine superiore dentatis, soris inferioribus solitariis horizontalibus, superioribus valde obliquis.

Hab. Insula Owhyhee. *D. Menzies.*

Caudex brevis, subrepens, basi radicibus paucis ramosis donatus, paleaceo-setaceis, setis atro-fuscis.

Stipes duas ad tres uncias longus, atro-purpureus, nitidus, glaber, inferne teres, superne hinc læviter canaliculatus. *Rachis* huic similis.

Frondes spithamææ, fere ad pedales, erectæ, circumscriptione lineares, pinnatæ, pinnis approximatis horizontaliter patentibus, inferioribus rhomboideis, superioribus oblongis vel oblongo-quadrangularibus, angulo inferiore affixis, basi superiore truncata, una cum latere inferiore integerrimis, margine superiore, apiceque obtusissimo crenato-serratis, obscure costatis penninerviis; costa prope marginem inferiorem, ubi nervo solitario parallelo, soro unico, gerente, ad latus superius nervi plurimi, obliqui, fere horizontales, soriferi.

Sori lineari-oblongi.

Involucra albo-fuscescentia, membranacea.

Capsulæ fuscæ, longe pedicellatæ, annulo fere completo cinctæ.

Semina oblonga angulata sub summo lente subreticulata.

Fig. 1. Pinna, e medio frondis, fertilis. f. 2. Capsula. f. 3. Semina.

Communicated by our good friend Archibald Menzies, Esq., who found it in the Island of Owyhee. It was marked by that gentleman, "*Asplenium, nova species;*" and we entirely agree with him in its being so. Its near ally is, unquestionably, *Asplenium monanthemum* of Linnæus, and of Smith *Icones*, Tab. 73, an inhabitant of the Cape of Good Hope; and as we know, from specimens we have received from the Rev. R. T. Lowe, of Madeira also. That plant is always much broader in its circumscription near the middle, more attenuated at the base and at the extremity, having the pinnæ of a more delicate texture, much longer and narrower, more disposed to be caniculated in the upper margin at the base, and with fewer sori, and those (mostly indeed solitary) confined to the lower side of the pinna.

Sprengel describes the *Aspl. monanthemum* as an inhabitant of New Spain, Martinique, Peru, &c.; and he makes the *Asplenium nanum* of Willdenow to be synonymous with it. Now this latter plant is indeed an inhabitant of Martinique, and is figured in Plumier; but, as that figure shows, it is quite a different species from *A. monanthemum.*

Todea Fraseri?

D.r Greville Del.t

J. Swan Sc.

TODEA FRASERI.

FILICES.—Osmundaceæ. *Br., Kaulf.* Osmundaceæ. *Spreng.* Schismatopterides. *Willd.*

Gen. Char. *TODEA*, Willd. *OSMUNDÆ*, Pars., Thunb., Sm., Br. *ACROSTICHI* species, Linn. *Capsulæ* globosæ, pedicellatæ, reticulatæ, gibbere (vel annulo) dorsali pellucido, lateraliter dehiscentes, venulis frondis infer. insidentes. *Spreng.*

Todea *Fraseri;* frondibus bipinnatis membranaceis glabris, pinnulis oblongis profunde serratis, pinnarum rachi alata.

Hab. In rupibus madidis apud "*Bougainville Cataract,*" in montibus cæruleis Novæ Hollandiæ. *D. Fraser.*

Caudex erectus, brevis? crassus, subsquamosus, vestigiis frondium vetustarum cicatricatus, ad apicem frondosus.

Stipites subquadripollicares, semiteretes, glabri, hinc sulcati, inferne squamis fuscis latis membranaceis instructi.

Frondes, circumscriptione, ovato-lanceolatæ, bipinnatæ, pinnis patentibus lanceolato-acuminatis, sessilibus, iterum pinnatis, pinnulis oblongis, obtusis, pellucido-membranaceis, (siccitate) olivaceo-fuscis, minute reticulatis, costatis, parallelo-venosis, venis simplicibus rarissime furcatis. *Rachis primaria* nuda, nisi extremitatem versus frondis, ubi, *secundaria* vel pinnarum, membranaceo-alata.

Capsulæ in venas pinnularum, præcipue basin versus, in parte inferiori frondis sparsæ, pallide fuscæ, sphericæ, pedicellatæ, reticulatæ, rima verticali a basi ad gibberem dorsalem vel annulum reticulatum, albido-pellucidum dehiscens.

Semina parva, subglobosa, pellucida.

Fig. 1. Pinnula cum capsulis. f. 2. Portio pinnulæ. f. 3. 4. 4. Capsulæ. f. 5. Semina:—*magn. auct.*

We have here followed Swartz, Willdenow, Kaulfuss, and Sprengel, in retaining the genus *Todea*, as distinguished from *Osmunda*, with which Brown, as Thunberg has done, unites it.

There is a difference of habit in the two genera, mainly however arising, we must confess, from the circumstance of the fructifications being placed on the back of the *unchanged* frond in *Todea;* whilst in *Osmunda* they are situated on the altered and contracted pinnules. In *Osmunda regalis*, however, we find the ring or gibbous portion distinctly striated; in *Todea* it is reticulated.

The very interesting species here represented,—the second only of the genus now described,—was communicated to us by Mr. Fraser, who observes, that he found it but in one spot, below moist rocks, at Bougainville's Cataract, in the Blue Mountains of New Holland. It differs remarkably from *T. africana*, which is equally a native of New Holland, by the delicate and subpellucid texture of its frond. A third species of *Todea*, but not probably an Australasian plant, is known to Mr. Brown, having a frond of a similar habit with that of *T. Fraseri*, as may be inferred from his observations, under the genus *Osmunda*, Prodr. p. 163: "Quoniam in Todeâ *Willd.* capsulæ vere pedicellatæ, et cum porro *alia species* existit, *iisdem pariter dorsalibus*, at *fronde pellucidâ Trichomanis instar donata*, consultiùs duxi ambas ad Osmundam amandare."

Greville Del.

Nephrodium Goldianum.

TAB. CII.

NEPHRODIUM GOLDIANUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *NEPHRODIUM*, Br. *NEPHRODII* species, Mich. *ASPIDII* species, Sw.
Sori rotundi, dorsales. *Involucrum* reniforme, sinu affixum, marginibus liberis. *Br.*

Nephrodium *Goldianum;* frondibus pinnatis, pinnis profunde pinnatifidis breviter petiolatis, laciniis oblongis acutiusculis subfalcatis, mucronato-serratis, soris centralibus intra marginem et costam.

Aspidium Goldianum. *Hooker in Goldie's Acc. of rare Canad. Pl. in Edin. Phil. Journ. v.* 6. *p.* 333.

Hab. America Septentrionali. In Canada præcipue. *D. Goldie. D. Holmes. D^a Percival. D. Sheppard.* Prope Novam Eboracensem. *Torrey.*

Stipes pedalis, erectus, semiteres, hinc sulcatus, pallide fuscus, nitidus, squamis deciduis paleaceus.

Frons pedalis ad sesquipedalem et forsitan ultra, circumscriptione ovato-oblonga, pinnata, pinnis remotiusculis breviter petiolatis, inferioribus præcipue, lanceolato-acuminatis, profunde pinnatifidis, laciniis subuncialibus, oblongis, acutiusculis, paululum falcatis, serratis, serraturis obtusis, mucrone vel spinula minutissima terminatis. *Color* totius frondis, statu sicco, flavo-virescens, subtus pallidior. *Sori* in lineis duabus dispositi, singula costam intra et marginem quasi intermedia, disposita. *Involucrum* rotundato-reniforme, sinu profundo affixum.

Capsulæ longe pedicellatæ, fuscæ.

Semina subangulata, reniformi-rotundata, fusco-flavescentia, limbo pallidiore cincta.

Fig. 1. Lacinia pinnæ cum soris. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

That this species must have been known to the writers on American Botany, I cannot for a moment doubt: but if it be included in any of their Floras, it is confounded with some other species, perhaps with *Nephrodium cristatum* by Michaux, or with *N. Filix Mas* by Pursh, judging from a specimen sent me by Professor Torrey from New York; and it is very certain that both these authors consider their respective plants to be different from those of the same name in Europe.

The present is indeed a very handsome and a very decidedly marked species, coming, perhaps, nearest to the North American *Nephrodium marginale*, in which, as the name implies, the fructifications are altogether marginal.

Adiantum amœnum.

TAB. CIII.

ADIANTUM AMŒNUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd*

Gen. Char. *Sori* marginales, punctiformes vel lineares. *Involucrum* e margine frondis replicato, disco venoso capsulifero, limbo membranaceo libero. *Br.*

Adiantum *amœnum;* fronde triplicato-pinnata, foliolis rigidis lato-cuneatis breve petiolatis apice serratis (frondium sterilium ovatis obtusis basi oblique cuneatis), stipite rachique glaberrimis hinc solummodo piloso-scabris.

Adiantum amœnum. *Wallich MSS.*

Hab. In India Orientali (e Nepaliâ?). *Wallich.*

Radix, ut videtur, omnino fibrosa, fibris flexuosis, ramosis, fuscis.

Stipites plurimi ex eadem radice, palmares, erecti, flexuosi, aterrimi, nitidi, hinc sulcati et piloso-scabri, pilis fuscis, ad basin paleaceo-squamosi.

Frondes digitales et ultra, circumscriptione suborbiculares, triplicato-pinnatæ, pinnis elongatis, oblongo-lanceolatis, obtusis.

Rachis subgracilis, atra, nitida.

Foliola semiunciam longa, brevi-pedicellata, pedicello hinc superne piloso-scabro; frondium *sterilium* ovata, obtusa, basi oblique cuneata, *fertilium* late cuneata, apice lobata, lobis plerumque tribus, dentato-serrata, coriacea, rigida, glabra.

Sori transversim oblongi, in singulo lobo folioli.

Involucra membranaceo-coriacea, fusca, arcte inflexa, majuscula, approximata.

Capsulæ sublonge pedicellatæ, annulo lato donatæ.

Semina angulata, subreticulata, pellucida, flava.

Fig. 1. Pinna sterilis e fronde fertili. f. 2. Foliolum fertile, subtus visum. f. 3. Involucrum, subtus visum, cum capsulis. f. 4. Capsulæ. f. 5. Semina:—*magn. auct.*

Communicated by the Honourable the East India Company as a native of the East Indies; but of which particular district of the Indian possessions is not stated:—probably Nepaul. It differs from every species hitherto described, in many points; yet in the decidedly cuneate form of the foliola, it approaches the tribe with the membranaceous leaflets, to which *A. Capillis Veneris* belongs. Here, however, the foliage is remarkably rigid and coriaceous; and on looking at the upper side of a frond, the stipes, rachis, and pedicels will be found to be rough with short close-set harsh brown hairs, whilst the rest of the plant is quite glabrous.

Adiantum Lunulatum?

Dr. Greville Delt.

TAB. CIV.

ADIANTUM LUNULATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*

Gen. Char. *Sori* marginales, punctiformes vel lineares. *Involucrum* e margine frondis replicato, disco venoso capsulifero, limbo membranaceo, libero. *Br.*

Adiantum *lunulatum*, glabrum; fronde pinnata, pinnis sublonge petiolatis lunulato-oblongis obtusissimis, suprema cuneata, margine superiore lobato.

Adiantum lunulatum. *Burm. Fl. Ind. p.* 235. *Sw. Syn. Fil. p.* 121. *Willd. Sp. Pl. v.* 5. *p.* 430. *Don Prodr. Fl. Nepal. p.* 16. *Kaulf. Enum. Fil. p.* 205. *Spreng. Syst. Veget. v.* 4. *p.* 110. *Reliq. Hænk. p.* 62.

Pteris lunata. "*Retz. Obs.* 2. *p.* 28. *t.* 4."

Adiantum lunatum. *Cavan. Prælect.* 1801. *n.* 676.

Adiantum arcuatum. *Swartz. Syn. Fil. p.* 122. *Willd. Sp. Pl. v.* 5. *p.* 431.

Capillaris malabarica non ramosa, folio rotundato dentato. *Petiv. Gazoph. t.* 54. *f.* 10.

Avenka. *Hort. Malab. v.* 12. *p.* 73. *t.* 40.

Hab. In India Orientali:—arenosis humidis in Malabaria. *Rheede.* Brasilia. *Swartz.* Insula Java. *Burman.* In Nepalia legerunt *Hamilton* et *Wallich.* Insulis Philippinis, Marianis, et ad Acapulco. *Cavan. Willd. Chamisso.* In Mexico. *Hænke.*

Radix cæspitosa, fibrosa, fibris tenuibus, valde ramosis, flexuosis, tomentosis.

Stipites plurimi ex eadem radice, graciles, paululum, ut videtur, decumbentes, atro-fusci, nitidi, compressi, glabri.

Frons digitalis ad spithamæam, circumscriptione oblonga, obtusa, simpliciter pinnata, pinnis alternis, remotiusculis, petiolatis, petiolo semiunciam longo, tenui, gracillimo, unciam longis, lunulato-oblongis, obtusissimis, radiato-venosis, basi truncatis membranaceis, pallide viridibus, suprema cuneata, margine superiore semicirculari, lobato, lobis contiguis non raro confluentibus, fructiferis. *Rachis* gracilis, aterrima, nitida, quandoque (fide *Kaulfuss*) apice radicans.

Sori lineares, marginem loborum occupantes, nunc confluentes.

Capsulæ numerosæ, longe stipitatæ. *Semina* triangularia, pallida.

Fig. 1. Pinna. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

Adiantum lunulatum appears to have a very extended geographical range, being found both upon the continent* and the islands of India, as well as in Mexico.

The editor of the *Reliquiæ Hænkeanæ*, on the authority of specimens in Willdenow's herbarium, has referred the *A. arcuatum* of that author and Swartz (the *A. lunatum* of Cavanilles) to our plant, as a very trifling variety with the lobes of the pinnæ more deeply cut than usual.

* As far north as Nepaul, where the specimen here figured was gathered by Dr. Wallich.

Dendrobium Smeeanum

TAB. CV.

DAVALLIA EMERSONI.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *DAVALLIA,* Sm. *Sori* subrotundi (vel in lineola verticali) margini plerumque approximati. *Involucrum* superficiarum, ex apice venæ unicæ ortum, lateribus vel latâ basi adnatum, exteriùs et verticaliter liberum. *Br.*

Davallia *Emersoni;* fronde parce pilosa simplici pinnatifida, segmentis oblongis obtusis integerrimis, soris in apicem loborum.

Hab. In Zeylona. *Emerson, M.D.*

Radix fibrosus, fibris ramosis, nigris, pilosis.

Frondes aggregatæ, pedales, subcoriaceæ, lanceolatæ, sessiles, simplices, superficie margineque remote pilosis, pilis brevibus rigidis, atro-fuscis, basi apiceque attenuatæ et integerrimæ, reliquæ pinnatifidæ, pinnatim ramosæ, laciniis oblongis obtusis, integerrimis.

Involucra oblongo-cucullata, coriacea, extus dehiscentia.

Capsulæ subduodecim in singulo soro, pedicellatæ, pedicellis longitudine involucri, et in ejus fundo insertis.

Semina sphærica, reticulata, flavo-fusca.

Fig. 1. Lacinia frondis superne visa. f. 2. Portio frondis, cum soris. f. 3. Portio laciniæ fructificantis, epidermide in partem sublata, ut venæ capsularum in conspectum veniant. f. 4. Capsulæ. f. 5. Semina:—*magn. auct.*

This very curious species of *Davallia* is evidently allied to the *D. pectinata* of Smith, and the *D. contigua* of Hedwig, as far as can be judged from the very imperfect account we have of the latter; both being natives of the islands of the Pacific Ocean, and both differing from ours in the shape and structure of the laciniæ of the frond.

The only specimens we have were gathered by Dr. Emerson in Ceylon; an island which, were it properly investigated, would perhaps yield as abundant a harvest of interesting Ferns as any spot of the like extent on the surface of the globe.

1

2

3

4

Cyathea Smurtal?

Dr. Greville Del.t

CYATHEA SINUATA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd., Spreng.*

Gen. Char. *CYATHEA,* Sw. *Sori* globosi dorsales distincti, divisura vel medio venæ insidentes. *Involucrum* infra sorum insertum, transversim æqualiter vel laceratim dehiscens.

Cyathea *sinuata;* frondibus simplicibus lanceolatis sinuatis costatis venosis, soris in medio venarum lateralium.

Hab. In Zeylona, ubi *Pas-dum-Karle* dicta. *Emerson, M.D.*

Caudex —— ? erectus.

Stipites breves, versus apicem caudicis inserti, sparsi, nigro-fusci, nitidi, glabri, paululum muricati, inferne dilatati.

Frondes plurimæ, versus apicem caudicis congestæ, pedales, sesquipedales, coriaceo-membranaceæ, glabræ, lanceolatæ, basi apiceque attenuatæ, margine sinuato-lobatæ, lobis superioribus obsoletis, ad summum apicem serratæ, costatæ, venosæ, venis pinnatim ramosis, ramis soriferis.

Sori, semper in venis lateralibus et medium versus, inserti.

Involucrum infra sorum insertum, exacte globosum, membranaceum, reticulatum, transversim sed irregulariter dehiscens, parte inferiore persistente pateriformi, margine magis minusve lacerato.

Receptaculum capsuliferum, hemisphæricum.

Capsulæ sphericæ, annulo fere completo cinctæ, pedicellatæ.

Fig. 1. Portio fructificans frondis. f. 2. Sorus dehiscens. f. 3. Pars inferior persistens pateriformis involucri, cum receptaculo capsulisque. f. 4. Capsulæ:—*magn. auct.*

The old genus *Cyathea* of Sir J. E. Smith has been divided by Mr. Brown; and the true *Cyatheæ* are by him considered to be *C. arborea, dealbata, medullaris, affinis,* &c., in all of which, as well as in four other undescribed species, there is a spherical involucre, bursting transversely and equally, in a lacerated manner, inserted upon the forking of a vein;—but, observes Mr. Brown, in a fifth species from the Molucca Isles, the involucre arises from the *middle of a vein,* "at quoniam hæc a congeneribus differt pinnis integerrimis subensiformibus sorisque sparsis, legem insertionis haud multum infirmat." To this *Cyathea* from the Molucca Isles, alluded to by Mr. Brown, our *C. sinuata* is, in all probability, closely allied, if it be not the same species. It is quite unlike any hitherto described one; and we regret not to have seen more perfect specimens than those here figured, which give no idea of the height of the caudex, or the thickness to which it may be supposed to arrive.

Pteris chrysosperma!

PTERIS CHRYSOCARPA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *PTERIS*, Linn. *Sori* lineares, marginales, continui, capsulis sinu involucri insertis. *Involucrum* marginale, continuum, scariosum, intus liberum. *Br.*

Pteris *chrysocarpa;* fronde tri-quadripinnata, foliolis linearibus acutis petiolatis, subtus aureo-flavis.

Lomaria aurea. *Wallich MSS.*

Hab. In Nepalia (*Hamilton*); ubi etiam in montibus prope Katmandu legit *Cl. Wallich.*

Nomen vernac. *Mousaga Mounoza* Nepalensibus.

Caudex, ut videtur, repens, radiculas fibrosas emittens.

Stipes spithamæus ad pedalem, erectus, teres, glaber, fuscus, subnitidus, hinc sulcatus.

Frons, circumscriptione, ovato-lanceolata, plerumque triplicato-pinnata, pinnis alternis, primariis subremotis, pinnulis subunciam longis, breve petiolatis, linearibus, acutis, superne convexis, medio canaliculatis, viridibus, subtus omnino pulcherrime aureo-flavis, inferioribus pinnarum non raro iterum pinnulatis. *Rachis* universalis partialisque glabræ, pallide flavo-fuscæ. *Frondes* steriles nondum vidimus.

Sori marginales, in sinu involucri inserti, demum pedicellorum elongatione pinnarum totum dorsum tegentes.

Involucrum continuum, marginale, membranaceum, flavum, primum capsulas omnino tegens, interius dehiscens.

Capsulæ numerosissimæ, flavæ, longe stipitatæ.

Semina minuta, sphærica, subreticulata.

Fig. 1. Pinna fertilis. f. 2. Portio ejusdem ut capsularum insertio appareat. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

Although in many particulars this agrees with the *Lomaria decomposita* of Don, yet I am inclined to think that, were it the same, so close an observer could not have failed to have remarked and described the singular and very beautiful colour of the whole underside of the frond; on which account Dr. Wallich, so long ago as 1816, when he gathered the plant in its native soil, named it *Lomaria aurea*. It is an extremely beautiful species, and no less remarkable in the striking contrast of colour which it exhibits, than in the much divided pinnæ. The first aspect of the fructification might have indeed well led Dr. Wallich to consider it as belonging to the genus *Lomaria:* but if the capsules be carefully traced to their insertion, they will be found to be placed in the sinus itself of the involucre, where a longitudinal vein passes, which may be looked upon as the receptacle.

There is a *Pteris aurea* of Poiret from Chili; so that, however unwillingly, we are obliged to change the specific as well as the generic name which Dr. Wallich had given to this plant.

Polypodium heteromorphum?

Dr. Greville Del.

J. Swan Sc.

POLYPODIUM HETEROMORPHUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. ***POLYPODIUM,*** Swartz. *Sori* subrotundi (seriati, sparsi vel conferti). *Involucrum* nullum. *Br.*

Polypodium *heteromorphum,* simplex vel ramosum, hirsutum, pinnatum; pinnis breviter petiolatis ovalibus subintegris vel oblongis pinnatifidis, soris in singula vena solitariis.

Hab. In rupibus humidis prope verticem montis Pichinchæ, Andium Peruvianarum. *D. Prof. Gul. Jameson.*

Planta valde polymorpha, ubique hirsuta.

Stipes ut et rachis, filiformis, hirsutus.

Frons, circumscriptione, linearis, palmaris ad spithamæam, nunc simplex, flexuosa, nunc bis terve dichotoma, ramis pinnatis, pinnis remotiusculis semiunciam fere ad unciam longis, brevissime petiolatis, ovalibus, et tunc marginibus integris vel subintegris, vel oblongis pinnatifidis vel sinuato-pinnatifidis, lobis obtusissimis, ubique hirsutis, pilis longis versus basin ramosis, nunc stellatim divisis. *Color* fusco-viridis.

Sori in singula vena solitarii, rotundati.

Capsulæ annulo fere completo cinctæ, pedicellatæ.

Semina subtriangularia flavescenti-fusca.

Fig. 1. *Polypodium heteromorphum* statu simpliciter pinnata. f. 2. Idem, rachi dichotome divisa, pinnisque ovalibus integris. f. 2. Idem, pinnis sinuato-pinnatifidis et pinnatifidis:—*magn. nat.* f. 3. Pinna, cum soris. f. 4. Pili. f. 5. Capsulæ. f. 6. Semina:—*magn. auct.*

This is a very singular and interesting species of *Polypodium,* like none of the genus with which we are acquainted, or which we can find described in books. Indeed, so variable are the specimens from the same tuft, as gathered by Professor W. Jameson "upon the top of the mountain Pichincha, growing in large patches, straggling or hanging over the face of the dripping rocks," that if several of them were seen separately, they might well be supposed to constitute distinct species. The simple-fronded specimens have some affinity in their mode of growth with *Asplenium Trichomanes* and *viridis,* but those with the divided fronds have the ramifications as regularly dichotomous as in the *Gleicheniæ:* were this not the case, we might have supposed that the ramification depended upon innovations, or proliferous shoots.

TAB. CIX.

Lycopodium tetragonum

Dr Greville Delt. *J. Swan Sc.*

TAB. CIX.

LYCOPODIUM TETRAGONUM.

FILICES.—Lycopodineæ. *Swartz, Br., Kaulf.* Stachyopterides. *Willd.*

Gen. Char. *LYCOPODIUM,* Linn. *Capsulæ* uniloculares, axillares, sessiles; aliæ bivalves, farina repletæ; aliæ bi-trivalves, corpusculis 1—6, globosis. *Br.*

Lycopodium *tetragonum;* foliis quadrifariam arcte imbricatis ovatis subacutis concavis carinatis ciliatis, capsulis axillaribus, caule adscendente dichotomo ramoso.

Hab. Prope verticem montis Pichincha, Andium Peruvianarum. *D. Prof. Gul. Jameson.*

Caulis basi decumbens, demum erectus, ramosus, ramis dichotomis, ubique foliosus.

Folia arcte quadrifariam imbricata, erecta, ovata, sessilia, subbreviter acuminata, intus concava, dorso convexa, carinata, flavo-virescentia, rubedine tincta, margine ciliata: *fructifera* paululum magis acuminata.

Capsulæ axillares, versus apicem ramorum, reniformes, bivalves, flavæ.

Semina minuta, trigona, semper ternatim in unum corpus congesta, demum libera.

Fig. 1. Folium caulinum. f. 2. Folium fructiferum. f. 3. Semina:—*magn. auct.*

No less than 140 species of *Lycopodium* are enumerated in Sprengel's edition of the *Species Plantarum,* with none of which will the plant here described accord. It inhabits almost the highest summits of Pichincha, and was communicated to us, along with many other rarities from the same mountain, by Professor W. Jameson.

Asplenium Subincisum?

TAB. CX.

ACROSTICHUM SUBCRENATUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ACROSTICHUM*, Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ, vel setæ in quibusdam capsulis interstinctæ). *Br.*

Acrostichum *subcrenatum;* frondibus pinnatis, pinnis brevi-petiolatis subcrenatis lanceolatis acuminatis, sterilibus (septenis) basi cuneato-attenuatis, fertilibus (novenis) multo minoribus, basi, inferioribusque apice, obtusiusculis, rachi subalata.

Hab. E Zeylona, ubi in rupibus, prope Saffragan, provenit, communicavit *D. Emerson, M.D.*

Caudex, ut videtur, brevis, subrepens, squamoso-paleaceus.

Stipes erectus, in fronde sterili digitalis, fertili spithamæus, gracilis, subnitidus, hic illic paleaceus, hinc sulcatus.

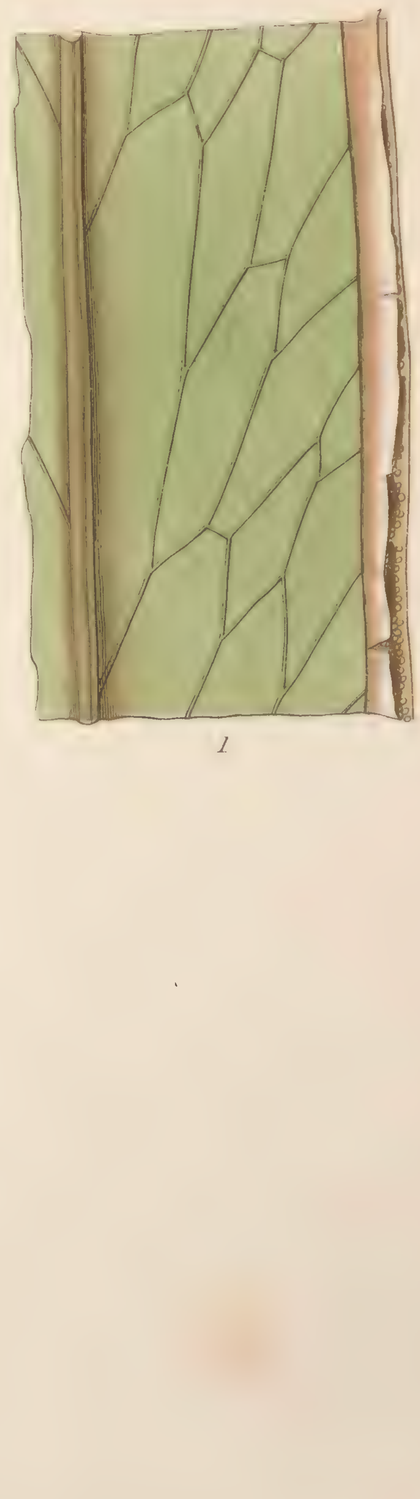
Frons sterilis palmaris, pinnata, pinnis lanceolatis longe acuminatis, basi suboblique cuneato-attenuatis, ultima majori, margine subcrenata, utrinque glabra, venis pinnatis, venulis reticulatim connexis. *Rachis* subalata:—*fertilis* pinnis quadruplo minoribus, inferioribus basi apiceque minus attenuatis obscure crenatis.

Capsulæ totam inferiorem partem pinnarum tegentes, flavo-fuscæ, pedicellatæ.

Semina subovalia, paululum angulata, pellucida.

Fig. 1. Portio pinnæ sterilis. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

Communicated by Dr. Emerson, who received it from Ceylon, with the native name "*Ale Kowila*" attached to it. We can find nothing corresponding with it to be described in any publication.



Lindsaea cuneifolia!

Dr. Greville Del.

J. Swan Sc.

TAB. CXI.

LINDSÆA ENSIFOLIA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *LINDSÆA,* Dryand. *Sori* lineares, margine paralleli sæpiusque aproximati. *Involucrum* ex apicibus venarum (unâ plurium) ortum ducens, exteriùs liberum.

Lindsæa *ensifolia;* glabra, frondibus pinnatis, pinnis (paucis) petiolatis alternis lineari-ensiformibus obtusis integerrimis basi attenuatis, soris marginalibus continuis.

Lindsæa ensifolia. *Swartz. Syn. Fil. p.* 118 & 137. *Willd. Sp. Pl. v.* 5. *p.* 420. *Kaulf. Enum. Fil. p.* 219. *Spreng. Syst. Veget. v.* 4. *p.* 79.

Pteris stricta. *Lam. Encycl. Bot. v.* 5. *p.* 713. *Swartz. Syn. Fil. p.* 96. *Willd. Sp. Pl. v.* 5. *p.* 370.

Adiantum ensifolium. *Poir. in Encycl. Bot. Suppl. v.* 1. *p.* 139.

Hab. Insula Mauritii et in Madagascaria. *Swartz; Néraud; Carmichael.*

Caudex brevis, vix repens, squamoso-hirsutus, radiculas filiformes flexuosas ramosas fuscas emittens.

Stipes spithamæus et ultra, erectus, strictus, fusco-viridis, nitidus, inferne badius, hinc canaliculatus.

Frons, in nostris exemplaribus, digitalis ad palmarem, circumscriptione oblonga, pinnata, pinnis paucis (5 ad 7), alternis, remotis, 3—4-unciam longis, lineari-ensiformibus, costatis, venisque obscuris reticulatis omnino glabris, integerrimis, obtusis, basi in stipitem vel petiolum brevem attenuatis.

Sori intra-marginales.

Involucrum lineare, continuum, membranaceum, pallidum extus dehiscens.

Capsulæ sphericæ, pedicellatæ.

Semina obtuse triangularia, subpellucida intense flava.

Fig. 1. Portio fructificans pinnæ. f. 2. Sorus et involucrum. f. 3. Semina:—*magn. auct.*

We are indebted to the Baron de Lessert for the opportunity of figuring this rare Fern, which was gathered by Mons. Néraud in the Mauritius, the same country in which it was first discovered, we believe, by Commerson.

Lycopodium varium!

D.r Greville Del.t

J. Swan Sc.

TAB. CXII.

LYCOPODIUM VARIUM.

FILICES.—Lycopodineæ. *Swartz.*, *Br.*, *Kaulf.* Stachyopterides. *Willd.*

Gen. Char. *LYCOPODIUM*, Linn. *Capsulæ* uniloculares, axillares, sessiles; alæ bivalves, farina repletæ: aliæ bi-trivalves, corpusculis 1—6, globosis. *Br.*

Lycopodium *varium;* caule ramoso, foliis sparsis linearibus decurrentibus integerrimis imbricatis vel patentibus, spicis terminalibus dichotomis simplicibusve, squamis obtusis integerrimis. *Br.*

Lycopodium varium. *Br. Prodr. Fl. Nov. Holl. p.* 165. *Spreng. Syst. Veget. v.* 4. *p.* 12.

Hab. In insula Otaheite. *Menzies.* In insula Van Diemen. *Brown;* ubi in monte Wellington legit *D. Fraser* et communicavit.

Radix nobis ignota.

Caulis subpedalis, erectus vel decumbens repetitim dichotome ramosus, basi nudiusculus, dein foliosus.

Folia numerosa, erecto-patentia, unguiculata, linearia, obtusiuscula, integerrima obscure costata, basi decurrentia, coriacea, glabra; suprema infra spicam ovato-lanceolata, costa dorso magis prominente. *Color*, siccitate, luteo-viridis.

Spicæ terminales, sessiles, lineares, acute tetragonæ, duas vel tres uncias longæ, nunc solitariæ, plerumque geminæ.

Squamæ arcte imbricatæ, quaternæ, cordatæ, obtusæ, breves, concavæ, dorso obtuse carinatæ (nunc linearioblongæ).

Capsulæ majusculæ, reniformes, glabræ, bivalves.

Semina pellucida, triangularia.

Fig. 1. Folium. f. 2. Folium e summitate caulis. f. 3. Squama spicæ, cum capsula. f. 4. Squama, a dorso visa. f. 5. Squama, intus visa. f. 6. Semina:—*magn. auct.*

The learned author of the *Prodromus Floræ Novæ Hollandiæ* has cited two varieties of this plant; the one, "α umbrosum, caulis debilis, folia patentia, spicæ filiformes, simplices vel divisæ, flaccidæ, laxiusculæ; squamæ oblongo-lineares, capsulis multoties longiores;" and the other, "β alpinum, caulis erectus: folia arcte imbricata, opaca, ecostata; spicæ dichotomæ, tetragonæ, squamæ ovatæ, capsulas vix superantes." We find the plant, indeed, to be very variable in its fructification: some of our specimens, received since the plate was engraved, have the extremity of the spike running out into a shoot, with sterile scales or leaves, exactly resembling those of the stem and branches; in others, the part bearing the fructification scarcely forms a spike at all: but the fructification appears axillary; and then the species comes very near the *Lycopod. gnidioides*, Ic. Fil. *t.* 30.

Lycopodium heterophyllum

TAB. CXIII.

LYCOPODIUM HETEROPHYLLUM.

FILICES.—Lycopodinæ. *Swartz.*, *Br.*, *Kaulf.* Stachyopterides. *Willd.*

Gen. Char. *LYCOPODIUM*, Linn. *Capsulæ* uniloculares, axillares, sessiles; aliæ bivalves, farina repletæ: aliæ bi-trivalves, corpusculis 1—6-globosis. *Br.*

Lycopodium *heterophyllum*; caule erecto dichotomo, foliis quadrifariis subulatis planis patulis incurvis, caulinis integerrimis nudis, in pedunculo denticulato-serratis piliferis, spicis pedunculatis subternis cylindraceis, squamis squarrosis ovatis acuminatis piliferis denticulato-serratis.

Hab. In insula Owyhee. *A. Menzies.*

Caulis erectus, pedalis et ultra, repetitim dichotome ramosus, ubique foliosus.

Folia quadrifariam inserta, patentia, incurva, subulata, plana, obscure costata, omnino integerrima, apice concolora.

Spicæ subternæ, longe pedunculatæ, cylindraceæ, erectæ, subrobustæ, insigniter squamosæ.

Pedunculus terminalis, foliosus, foliis quadrifariis, caulinis similibus, sed magis distantibus, marginibus spinuloso-denticulatis in pilum longum diaphanum flexuosum attenuatis.

Squamæ ovatæ, acuminatæ, piliferæ, margine spinuloso-denticulatæ.

Capsulæ reniformes, bivalves.

Semina pallido-flava, minutissima, subreticulata.

Fig. 1. Folium caulinum. f. 2. Portio pedunculi cum ejus foliis. f. 3. Squama cum capsula. f. 4. Semina:—*magn. auct.*

Discovered by A. Menzies, Esq. at Owyhee, during his voyage with Captain Vancouver. It is remarkable for the two kinds of leaves which it bears; those of the stem being perfectly destitute of a diaphanous hair point; while those of the peduncle, which in fact is but a prolongation of a branch, are singularly toothed, somewhat spinous at the margins, and terminated with a waved hair-like point. It will rank near *L. aristatum* of Humboldt.

Asplenium resectum!

Dr. Greville Del.

J. Swan Sc.

TAB. CXIV.

ASPLENIUM RESECTUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ASPLENIUM*, Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* e venâ lateraliter ortum ducens, margine superiore libero. *Br.*

Asplenium *resectum;* frondibus pinnatis, pinnis membranaceis oblongo-lanceolatis dentato-serratis, basi superiore truncatis, inferiore abscisso-cuneatis integerrimis, stipite rachique gracilibus glabris nudis.

Asplenium resectum. *Smith Icon. t.* 72. *Swartz. Syn. Fil. p.* 80. *Willd. Sp. Pl. v.* 5. *p.* 322. *Spreng. Syst. Veget. v.* 4. *p.* 84.

Asplenium inæquilaterale. *Willd. Sp. Pl. v.* 5. *p.* 322.

Hab. In insula Borboniæ. *Commerson.* Inter saxos ad marginem rivulorum, in sylvis montosis insulæ Mauritii. *Bojer.*

Caudex repens, squamosus, radiculas plures, fibrosas, fuscas, ramosas emittens.

Stipes digitalis, erectus, gracilis, atro-purpureus, nitidus, hinc sulcatus, basi subsquamosus.

Frons palmaris fere ad pedalem, circumscriptione lato-lanceolata, basi truncata, apice argute acuminata, pinnata, pinnis approximatis, plerumque alternis, subhorizontalibus, patentibus, tenuibus, membranaceis, oblongo-lanceolatis, obtuse acuminatis, unciam ad duas uncias longis, inæqualiter dentato-serratis, costatis, furcato-venosis, inæquilateralibus, basi superiore truncatis, inferiore abscisso-cuneatis, integerrimis.

Sori in venis lateralibus siti, oblongo-lineares.

Involucrum membranaceum, fuscum, costam versus dehiscens.

Capsulæ, annulo lato fere completo, cinctæ, pedicellatæ.

Semina intense flavo-fusca, subrotunda, tuberculata.

Fig. 1. Pinna fructificans. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

This, we believe, is certainly the *Aspl. resectum* of Smith in the *Icones* above quoted; but it must be confessed that it belongs to a group of the simply pinnated *Asplenia*, which are liable to much variation, and consequently to be determined with difficulty; on which account we are the more anxious to represent the present plant from perfect specimens, sent us by the excellent Bojer, through the kindness of Charles Telfair, Esq., from the Mauritius. It is indeed very nearly allied to the West Indian *Aspl. abscissum*, the pinnæ being almost exactly the same in shape, but that has the rachis winged.

Trichomanes quercifolium.

Dr. Greville Delt. *J. Swan Sc.*

TRICHOMANES QUERCIFOLIUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *TRICHOMANES*, Sm., Sw. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *quercifolium;* frondibus obovato-cuneatis in stipitem brevem attenuatis, profunde pinnatifidis, laciniis lineari-oblongis obtusis sinuatis apice soriferis, involucris exsertis.

Hab. In arboribus, in sylvis apud Esmeraldas, ab urbe Quito iter diei distantem. Amer. Merid. alt. 8000 ped. *D. Prof. Gul. Jameson.*

Caudex filiformis, repens, hic illic radicans, squamoso-tomentosus, fuscus.

Frondes 3—4 uncias longæ, unciam ad duas uncias latæ, obovato-cuneatæ, basi in stipitem brevem subtomentosum attenuatæ, membranaceæ, pulcherrime reticulatæ, profunde pinnatifidæ, laciniis lineari-oblongis, obtusis, sinuatis, penninerviis, superioribus apice soriferis. *Pili* pauci, furcati vel stellati ad marginem laciniarum.

Sori terminales, solitarii vel bini ternive in singula lacinia superiore.

Involucra omnino exserta, libera, subcylindracea, inferne attenuata, superne bilabiata, labiis erectis subrotundis.

Receptaculum longissimum, exsertum, ad basin solummodo, intra involucrum, capsuliferum.

Capsulæ orbiculares, compressæ, peltatæ, transversim complete annulatæ.

Semina parva, oblonga vel triangularia, flavo-fusca.

Fig. 1. Portio laciniæ cum soris. f. 2. Portio frondis:—*magn. auct.* f. 3. Pars inferior receptaculi cum capsulis. f. 4. Semina:—*magn. auct.*

Allied to *T. reptans* of Swartz and Willdenow; but distinguished by its much greater size, and the deeper and narrower segments of the frond.

Pteris serrulata!

TAB. CXVI.

PTERIS AURICULATA.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *PTERIS*, Linn. *Sori* lineares, marginales, continui; capsulis sinu involucri insertis. *Involucrum* marginale, continuum, scariosum, intus liberum.

Pteris *auriculata*; frondibus pinnatis, pinnis brevissime petiolatis triangulari-ovatis subtrilobis, vel basi sursum auriculatis inferioribus subrotundis, stipite rachique lævissimis nitidis.

Pteris auriculata. *Thunb. Fl. Cap. ed. Schultes. v.* 2. *p.* 733. *Willd. Sp. Pl. v.* 5. *p.* 365. *Swartz. Syn. Fil. p.* 103. *Spreng. Syst. Veget. v.* 4. *p.* 71. *Sieber Syn. Fil. no.* 8. *Schlentend. Adumb. Pl. t.* 22.

Adiantum auriculatum. *Thunb. Prodr. Fl. Cap. p.* 173.

Hab. Ad Promontorium Bonæ Spei. *Thunberg; Villette; Thom; Mund; Carmichael.*

Radix cæspitosa, e fibris numerosis ramosis subpilosis.

Stipes brevis, vix duas uncias longus, erectus, flexuosus, atro-purpureus, longissimus, nitidus.

Frons palmaris usque ad spithamæam, circumscriptione lanceolata, pinnata. *Pinnæ* alternæ, plerumque subremotæ, forma mire variantes; *inferiores* subrotundæ, integerrimæ, obtusissimæ, reliquæ magis minusve ovatæ vel triangulares, basi utrinque vel sursum solummodo auriculatæ, nunc obtusæ, nunc acutæ; *superiores* magis angustæ; *omnes* brevissime petiolatæ, subcoriaceæ, glabræ, supra intense virides, inferne pallidæ, costatæ, vix, nisi oculo bene armato, venosæ. *Rachis* glaberrima, atro-purpurea.

Sori marginales, continui.

Involucrum e margine membranaceo formatum, pallide fuscum, apice inæqualiter crenulatum, subundulatum.

Capsulæ numerosæ, pedicellatæ, annulo lato donatæ.

Semina parva, globosa.

Fig. 1. Portio pinnæ cum soro. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

At the time that our drawing was made, no figure existed of this species of *Pteris*; but since the engraving was executed, we find it represented in the last number of Schlentendal's excellent *Adumbrationes Plantarum*; of which, however, the descriptions have not yet reached us. The four numbers that we have seen are admirably illustrative of the Ferns of the Cape of Good Hope.

Trichomanes apodum.

D.r Greville Del.t

J. Swan Sc.

TAB. CXVII.

TRICHOMANES APODUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *TRICHOMANES*, Sm., Sw. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

Trichomanes *apodum*; frondibus minutis (plerumque) sessilibus cordato-rotundatis profunde lobatis minutissime reticulatis patenti-nervosis, lobis obtusis sinuatis, involucris exsertis submarginatis bilabiatis, caudice longe repente tomentoso.

Hab. In insula, Barbadoes dicta. *C. S. Parker.*

Caudex repens, longus, ramosus, tomentoso-radiculosus.

Stipes vix ullus, plerumque sessilis.

Frondes plurimæ, parvæ, semiunciam longæ, imbricatim decumbentes, cordatæ, rotundatæ, obtusæ, profunde lobatæ, sinubus obtusis, lobisque obtusis, sinuatis, submembranaceis, pellucide virentes, minutissime sub lente reticulatæ, nervosæ, nervis divaricatis in medio singuli lobi (nunquam radiatim vel parallelo-venosæ), ad marginem hic illic pilosæ, pilis stellatim ramosis.

Involucrum (an semper?) solitarium, in singula fronde, liberum, oblongum, basi attenuatum, utrinque marginatum, apice bilabiatum, labiis margine rubris.

Receptaculum longissime exsertum, filiforme, basi ubi capsulæ, paululum incrassatum.

Capsulæ peltatæ, annulo completo, ut in omnibus speciebus hujusce generis.

Semina subglobosa, limbo pellucido, circumscripta.

Fig. 1. Frons fertilis. f. 2. Pars inferior receptaculi, cum capsulis. f. 3. Semina:—*magn. auct.*

Closely as this species may appear at first sight to be allied to *Trich. reptans* (Ic. Fil. *t.* 32.) and *T. muscoides*, yet a more careful examination will prove it to be abundantly distinct. It is much smaller, has the fronds almost entirely sessile, more rounded and approaching to cordate, deeply and constantly lobed at the margin. The texture of the frond, too, is very different; here it approaches nearer to that of many frondose *Jungermanniæ*, the reticulation is small, and the nerves much less frequent, the main branches from the midrib or central nerve always following the direction of one of the lobes.

We are not aware that it has been found by any botanist but our friend C. S. Parker, Esq., in the island of Barbadoes.

Acrostichum tripartitum L.

D.r Greville Del.t

J. Swan Sc.

TAB. CXVIII.

ACROSTICHUM TRIPARTITUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ACROSTICHUM,* Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ, vel setæ in quibusdam capsulis interstinctæ). *Br.*

Acrostichum *tripartitum*; frondibus longe petiolatis, sterilibus reniformibus tripartitis, laciniis cuneatis trilobis, fertili trilobo valde squamoso.

Hab. In sylvis provinciæ Esmeraldas, Am. Merid. arborum truncis, legit *D. Prof. Gul. Jameson,* ad alt. 5000 ped.

Caudex repens, hic illic radiculosus, undique ferrugineo-squamosus.

Stipites erecti, frondium sterilium vix unciam, fertilium duas ad tres uncias longi, flavo-fusci, squamosi, squamis fuscis lanceolato-acuminatis membranaceis sparsis.

Frondes simplices, steriles, reniformes, subcoriaceæ, squamosæ, squamis demum deciduis, tripartitæ, laciniis cuneatis basi attenuatis, trilobis, lobis obtusis plerumque integris: *fertiles* circumscriptione cordatæ, primum valde fusco-squamosæ, dein nudiusculæ, trilobæ, lobis rotundatis, integris vel subsinuatis.

Capsulæ totam inferiorem partem frondis tegentes, squamis interspersæ, sphericæ, intense fuscæ, annulo lato fere completo cinctæ.

Semina ovalia, vel subrotunda, lævia.

Fig. 1. Capsulæ. f. 2. Semina:—*magn. auct.*

The nearest affinity with this plant is unquestionably the *A. flabellatum* of Humboldt, a native of rocky places in Venezuela; but that is much larger, has the sterile fronds in the first instance bipartite, the segments multifid; whilst the fertile ones are orbicular and peltate, (according to the figure, but reniform in the description,) quite glabrous, or free from scales, and surrounded by a diaphanous and crenated margin. That species appears, as it were, intermediate between our plant and *A. peltatum* of Swartz.

Acrostichum fæniculaceum.

Dr. Greville Delt.

J. S[illegible]

TAB. CXIX.

ACROSTICHUM FŒNICULACEUM.

FILICES.—Gyratæ. *Br.* Polypodiaceæ. *Kaulf.* Filices veræ. *Willd.*, *Spreng.*

Gen. Char. *ACROSTICHUM,* Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ, vel setæ in quibusdam capsulis interstinctæ). *Br.*

Acrostichum *fœniculaceum;* frondibus sterilibus reniformi-multifidis, laciniis repetitim dichotomis lineari-filiformibus fertilibus bilobis supra nudis, margine diaphano duplicato-crenato.

Hab. Supra truncos putridos arborum, in sylvis apud Esmeraldas, Amer. Sept. altit. 3000 ped. *D. Prof. Gul. Jameson.*

Caudex longe repens, gracilis, squamosus, subtus radices plures, tenues, filiformes ramosas emittens.

Stipites 3—4 uncias longi, frondium sterilium et fertilium subæque longi, erecti, graciles, squamosi.

Frondes steriles, circumscriptione reniformes, duas ad tres uncias latæ, repetitim dichotome ramosæ, laciniis divaricatis, tenuissime linearibus, planis, obscure costatis, glabris, apicibus furcatis, acutis: *fertiles* vix unciam latæ, bilobæ, lobis rotundatis, facie superiore nudo, margine diaphano duplicato-crenato, subtus vix squamulosis.

Capsulæ numerosæ, brevi-pedicellatæ, globosæ.

Semina subglobosa.

Fig. 1. Frons fertilis, subtus visa. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

Received, along with our *A. tripartitum,* from W. Jameson, Esq., whose love of science has justly entitled him to the honour which has lately been conferred upon him, of the appointment to the Professorship of Natural History and Chemistry in the University of Quito. We trust that this situation will give him still greater opportunities for exploring the botanical riches of the magnificent country in which his residence is now fixed. The success which has already recompensed his exertions in pursuit of plants, is a sufficient proof of how much yet remains undiscovered.

Meniscium triphyllum.

TAB. CXIII.

LYCOPODIUM HETEROPHYLLUM.

FILICES.—Lycopodinæ. *Swartz., Br., Kaulf.* Stachyopterides. *Willd.*

Gen. Char. *LYCOPODIUM,* Linn. *Capsulæ* uniloculares, axillares, sessiles; aliæ bivalves, farina repletæ: aliæ bi-trivalves, corpusculis 1—6-globosis. *Br.*

Lycopodium *heterophyllum;* caule erecto dichotomo, foliis quadrifariis subulatis planis patulis incurvis, caulinis integerrimis nudis, in pedunculo denticulato-serratis piliferis, spicis pedunculatis subternis cylindraceis, squamis squarrosis ovatis acuminatis piliferis denticulato-serratis.
Hab. In insula Owyhee. *A. Menzies.*

Caulis erectus, pedalis et ultra, repetitim dichotome ramosus, ubique foliosus.

Folia quadrifariam inserta, patentia, incurva, subulata, plana, obscure costata, omnino integerrima, apice concolora.

Spicæ subternæ, longe pedunculatæ, cylindraceæ, erectæ, subrobustæ, insigniter squamosæ.

Pedunculus terminalis, foliosus, foliis quadrifariis, caulinis similibus, sed magis distantibus, marginibus spinuloso-denticulatis in pilum longum diaphanum flexuosum attenuatis.

Squamæ ovatæ, acuminatæ, piliferæ, margine spinuloso-denticulatæ.

Capsulæ reniformes, bivalves.

Semina pallido-flava, minutissima, subreticulata.

Fig. 1. Folium caulinum. f. 2. Portio pedunculi cum ejus foliis. f. 3. Squama cum capsula. f. 4. Semina:—*magn. auct.*

Discovered by A. Menzies, Esq. at Owyhee, during his voyage with Captain Vancouver. It is remarkable for the two kinds of leaves which it bears; those of the stem being perfectly destitute of a diaphanous hair point; while those of the peduncle, which in fact is but a prolongation of a branch, are singularly toothed, somewhat spinous at the margins, and terminated with a waved hair-like point. It will rank near *L. aristatum* of Humboldt.

ALPHABETICAL INDEX

TO THE

FIRST VOLUME (FASCIC. I.—VI.)

OF

ICONES FILICUM.

	Tab.
Acrostichum apodum *Kaulf.*	99
Acrostichum australe L.	8
Acrostichum cervinum Sw.	81
Acrostichum ciliare Pet. Th.	21
Acrostichum crinitum *L.*	1
Acrostichum dichotomum L.	17
Acrostichum fœniculaceum *H.* & *Gr.*	119
Acrostichum flagelliferum *Wall.*	23
Acrostichum glandulosum *Carm.*	3
Acrostichum hybridum *Bor.*	21
Acrostichum Jamesoni *H.* & *Gr.*	86
Acrostichum leptophyllum DeC.	25
Acrostichum oblongum? Desv.	3
Acrostichum obtusatum *Carm.*	22
Acrostichum petiolatum Sw.	61
Acrostichum Raddianum *H.* & *Gr.*	4
Acrostichum salicifolium Willd.	61
Acrostichum spathulinum Radd.	4
Acrostichum subcrenatum *H.* & *Gr.*	110
Acrostichum succisæfolium *Pet. Th.*	2
Acrostichum tripartitum *H.* & *Gr.*	118
Acrostichum villosum Sieb.	21
Acrostichum villosum *Sw.*	95
Acrostichum viscosum *Sw.*	61
Adiantum amœnum *Wall.*	103
Adiantum arcuatum Sw.	104
Adiantum auriculatum Thunb.	116
Adiantum cuneatum *Langsd.*	30
Adiantum ensifolium Poir.	111
Adiantum lunatum Cav.	104
Adiantum lunulatum *Burm.*	104
Adiantum pentadactylon *Langsd.* & *Fisch.*	98
Adiantum sagittatum Aubl.	87
Alsophila Perriniana Spreng.	68
Anemia adiantifolia β. *H.* & *Gr.*	16
Anemia adiantifolia Sw.	16
Anemia asplenifolia Sw.	16
Angiopteris erecta *Hoffm.*	36
Angiopteris indica Desv.	36
Antrophyum Boryanum *Spreng.*	74
Antrophyum pumilum *Kaulf.*	46
Aspidium caryotideum *Wall.*	69
Aspidium fragrans Sw.	70
Aspidium Goldianum Hook.	102
Aspidium proliferum *H.* & *Gr.*	96
Aspidium rhizophyllum *Sw.*	59
Aspidium Singaporianum *Wall.*	26
Asplenium australe Sw.	8
Asplenium delicatulum Presl.	92
Asplenium dentatum *L.*	72
Asplenium ensiforme *Wall.*	71
Asplenium fœniculaceum *Humb.*	92
Asplenium filipendulæfolium Pet. Th.	24
Asplenium Gilliesianum *H.* & *Gr.*	73
Asplenium inæquilaterale Willd.	114
Asplenium leptophyllum Cav.	25
Asplenium Menziesii *H.* & *Gr.*	100
Asplenium nodosum L.	52
Asplenium Phyllitidis Don	71
Asplenium plantagineum β. Lam.	43
Asplenium resectum *Sm.*	114
Asplenium rigidum Wall.	27
Asplenium subsinuatum *H.* & *Gr.*	27
Asplenium triphyllum *Presl.*	88
Botrychium lanuginosum *Wall.*	79
Botrychium simplex *Hitch.*	82
Ceterach pedunculata *H.* & *Gr.*	5
Clementea palmiformis Cav.	36
Cryptogramma acrostichoides *Br.*	29
Cyathea sinuata *H.* & *Gr.*	106
Danæa alata *Sm.*	18
Danæa elliptica* *Sm.*	51
Danæa nodosa *Sm.*	52
Davallia Emersoni *H.* & *Gr.*	105
Dicranopteris Bernh.	14
Filix Calmaria Rumph.	14
Gleichenia alpina *Br.*	58
Gleichenia Hermanni *Br.*	14
Gleichenia immersa *H.* & *Gr.*	15
Grammitis cheilanthoides Sw.	24
Grammitis decurrens *Wall.*	6
Grammitis flavescens Wall.	53
Grammitis furcata *H.* & *Gr.*	62
Grammitis involuta *Don*	53
Grammitis lanceolata *Sw.*	43
Grammitis leptophylla Sw.	25
Grammitis? plantaginea Wall.	53
Grammitis rutæfolia Br.	90
Gymnogramma chærophylla *Desv.*	45
Gymnogramma cheilanthoides *Kaulf.*	24
Gymnogramma filipendulæfolia Desv.	24
Gymnogramma leptophylla *Desv.*	25
Gymnogramma Loveii *H.* & *Gr.*	89
Gymnogramma rutæfolia *H.* & *Gr.*	90
Gymnogramma subglandulosa *H.* & *Gr.*	91
Hemionitis Boryana Willd.	74
Hemionitis chærophylla Poir.	45
Hemionitis cicutaria Herb. Banks.	45

* The Plate to this is by mistake marked 52; and the *D. nodosa*, by mistake 51.

	Tab.
Hemionitis cordata *Roxb.*	64
Hemionitis immersa Bory	46
Hemionitis leptophylla Lag.	26
Hemionitis reticulata? Bory	74
Hydroglossum dichotomum Willd.	55
Hymenophyllum badium *H.* & *Gr.*	76
Hymenophyllum ciliatum *Sw.*	35
Hymenophyllum crispatum *H.* & *Gr.*	77
Hymenophyllum dilatatum *Sw.*	60
Hymenophyllum hirsutum *Sw.*	84
Hymenophyllum marginatum *H.* & *Gr.*	34
Hymenophyllum semibivalve *H.* & *Gr.*	83
Lindsæa ensifolia *Sw.*	111
Lindsæa polymorpha *Wall.*	75
Lindsæa sagittata *Dryand.*	87
Lomaria aurea Wall.	107
Lycopodium atro-viride *Wall.*	39
Lycopodium cuspidatum Hook.	39
Lycopodium flagelliforme Schrad.	50
Lycopodium funiculosum Lam.	50
Lycopodium gnidioides *L.*	50
Lycopodium heterophyllum *H.* & *Gr.*	113
Lycopodium lævigatum Willd.	57
Lycopodium pinifolium Kaulf.	50
Lycopodium pulcherrimum *Wall.*	38
Lycopodium serratum *Thunb.*	37
Lycopodium subulifolium *H.* & *Gr.*	49
Lycopodium tetragonum *H.* & *Gr.*	109
Lycopodium varium *Br.*	112
Lycopodium Willdenovii *Desv.*	57
Lygodium dichotomum *Sw.*	55
Meniscium triphyllum *Sw.*	120
Mertensia dichotoma Willd.	14
Mertensia immersa Kaulf.	15
Nephrodium fragrans *Rich.*	70
Nephrodium Goldianum *H.* & *Gr.*	102
Niphobolus bicolor *Kaulf.*	44
Niphobolus rupestris *Spreng.*	93
Niphobolus sphærocephalus *H.* & *Gr.*	94
Olfersia cervina Presl.	81
Ophioglossum cordifolium Rob.	20
Ophioglossum ellipticum *H.* & *Gr.*	40 A.
Ophioglossum lusitanicum *L.*	80
Ophioglossum opacum *Carm.*	40 B.
Ophioglossum pendulum *L.*	19
Ophioglossum reticulatum *L.*	20
Osmunda adiantifolia L.	16
Osmunda asplenifolia Lam.	16
Osmunda cervina L.	81
Osmunda leptophylla Lam.	25
Parkeria pteridoides *Hook.*	97
Pleopeltis percussa *H.* & *Gr.*	67
Polybotrya cervina *Kaulf.*	81
Polypodium avenium Desv.	67
Polypodium crinitum *Poir.*	66
Polypodium cuspidatum Presl.	67
Polypodium dichotomum Thunb.	14
Polypodium erectum Forst.	36
Polypodium fragrans L.	70
Polypodium fusco-setaceum Bojer	66
Polypodium heteromorphum *H.* & *Gr.*	108
Polypodium? leptophyllum L.	25
Polypodium longifrons *Wall.*	65
Polypodium normale? Don.	65
Polypodium ovatum *Wall.*	41
Polypodium percussum Cav.	67
Polypodium rhizophyllum Sw.	59
Polypodium rupestre Br.	93
Polypodium scolopendrioides *L.*	42
Polypodium Scouleri *H.* & *Gr.*	56
Polypodium serpens Forst.	44
Polypodium sphærocephalum Wall.	94
Polypodium stellatum Vahl.	44
Polypodium stoloniferum Gmel.	44
Polypodium thelypteroides? Desv.	66
Pteris auriculata *Thunb.*	116
Pteris australis *H.* & *Gr.*	8
Pteris brasiliensis Radd.	28
Pteris chrysocarpa *H.* & *Gr.*	107
Pteris denticulata *Sw.*	28
Pteris furcata L.	7
Pteris lunata Retz.	104
Pteris quadrifida Presl.	28
Pteris stricta Lam.	111
Pteris tristicula Radd.	28
Ripidium dichotomum Bernh.	17
Schizæa dichotoma *Sw.*	17
Schizæa incurvata Meyer.	54
Schizæa pusilla* *Pursh.*	47
Schizæa rupestris *Br.*	48
Schizæa trilateralis *Schk.*	54
Scolopendrium revolutum Ham.	53
Tænitis furcata *Willd.*	7
Tænitis interrupta *Wall.*	63
Todæa Fraseri *H.* & *Gr.*	101
Trichomanes alatum *Sw.*	11
Trichomanes apodum *H.* & *Gr.*	117
Trichomanes ciliatum Hedw.	35
Trichomanes crispum *L.*	12
Trichomanes digitatum Sw.	33
Trichomanes dilatatum Forst.	60
Trichomanes floribundum *Humb.*	9
Trichomanes hirsutum L.	84
Trichomanes humile *Forst.*	85
Trichomanes lanceum *Bory.*	33
Trichomanes lucens *Sw.*	10
Trichomanes pinnatum Sw.	9
Trichomanes quercifolium Desv.	13
Trichomanes quercifolium *H.* & *Gr.*	115
Trichomanes reniforme *Forst.*	31
Trichomanes reptans *Sw.*	32
Trichomanes rhizophyllum Sw.	9
Trichomanes rigidum Hedw.	84
Trichomanes sinuosum *Rich.*	13
Trichomanes venosum *Br.*	78
Ugena dichotoma Cav.	55
Woodsia Perriniana *H.* & *Gr.*	68

* The Plate to this is by mistake marked 48; and that to *S. rupestris,* by mistake 47.